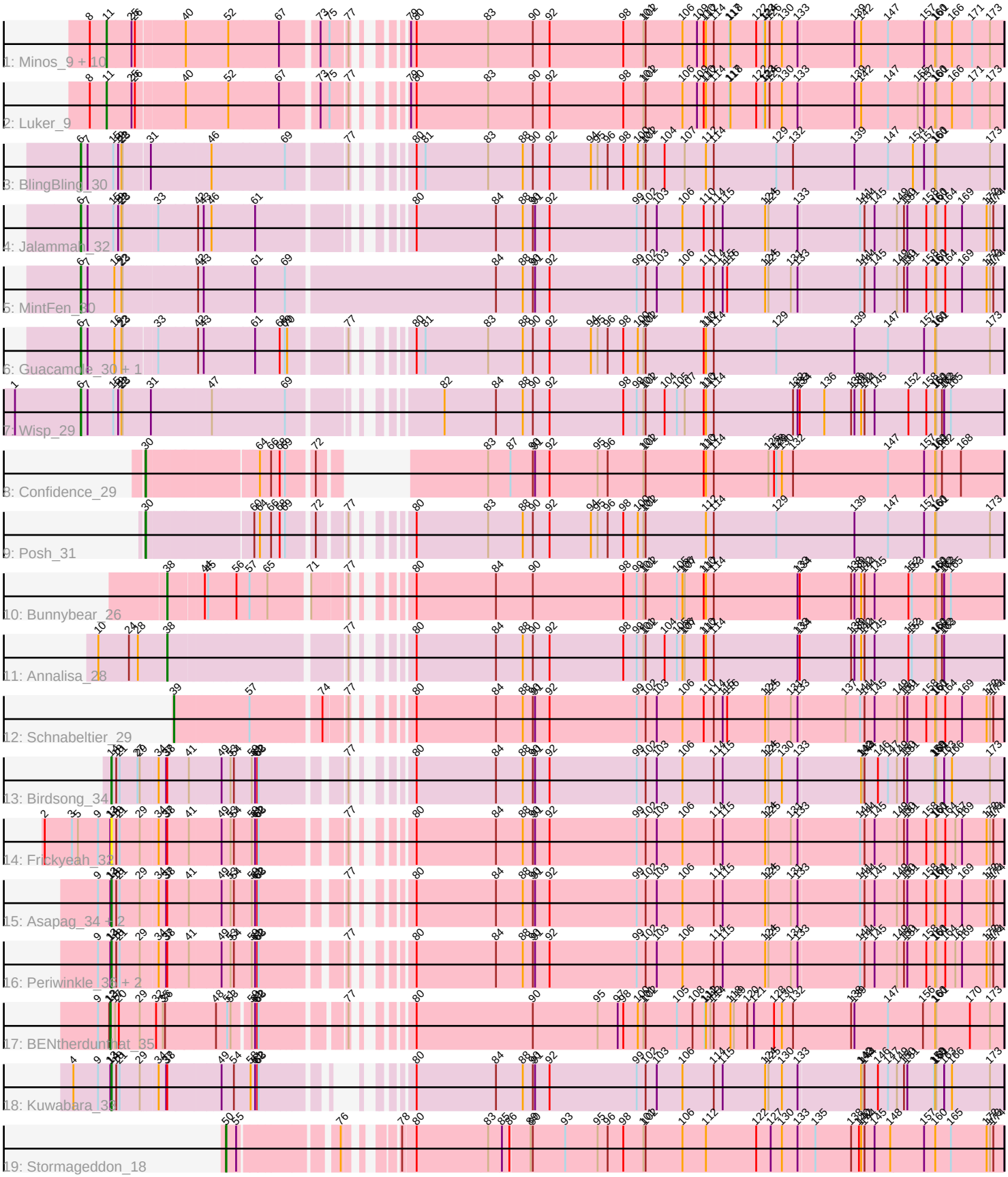
Pham 347862


1: Minos_9 + 10
2: Luker_9
3: BlingBling_30
4: Jalammah_32
5: MintFen_30
6: Guacamole_30 + 1
7: Wisp_29
8: Confidence_29
9: Posh_31
10: Bunnybear_26
11: Annalisa_28
12: Schnabeltier_29
13: Birdsong_34
14: Frickyeah_32
15: Asapag_34 + 2
16: Periwinkle_36 + 2
17: BENtherdunmat_35
18: Kuwabara_38
19: Stormageddon_18

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 347862 Report

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

Pham number 347862 has 34 members, 1 are drafts.

Phages represented in each track:
• Track 1 : Minos_9, Guillaume_9, Sticker17_9, GalacticEye_9, MrWormie_9, Nimi13_9, Charianelly_9, Damp_9, Newt_9, Jormungandr_9, Teal_9
• Track 2 : Luker_9
• Track 3 : BlingBling_30
• Track 4 : Jalammah_32
• Track 5 : MintFen_30
• Track 6 : Guacamole_30, JasperJr_30
• Track 7 : Wisp_29
• Track 8 : Confidence_29
• Track 9 : Posh_31
• Track 10 : Bunnybear_26
• Track 11 : Annalisa_28
• Track 12 : Schnabeltier_29
• Track 13 : Birdsong_34
• Track 14 : Frickyeah_32
• Track 15 : Asapag_34, BotCity_35, Getalong_35
• Track 16 : Periwinkle_36, Leroy_34, Horus_34
• Track 17 : BENtherdunthat_35
• Track 18 : Kuwabara_33
• Track 19 : Stormageddon_18

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 12 of the 33 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Charianelly_9, Damp_9, GalacticEye_9, Guillaume_9, Jormungandr_9, Luker_9, Minos_9, MrWormie_9, Newt_9, Nimi13_9, Sticker17_9, Teal_9,

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

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

• Annalisa_28, Asapag_34, BENtherdunthat_35, Birdsong_34, BlingBling_30, BotCity_35, Bunnybear_26, Confidence_29, Frickyeah_32, Getalong_35, Guacamole_30, Horus_34, Jalammah_32, JasperJr_30, Kuwabara_33, Leroy_34, MintFen_30, Periwinkle_36, Posh_31, Schnabeltier_29, Stormageddon_18, Wisp_29,

Summary by start number:

Start 6:
• Found in 6 of 34 (17.6%) of genes in pham
• Manual Annotations of this start: 6 of 33
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlingBling_30 (CV), Guacamole_30 (CV), Jalammah_32 (CV), JasperJr_30 (CV), MintFen_30 (CV), Wisp_29 (CV),

Start 11:
• Found in 12 of 34 (35.3%) of genes in pham
• Manual Annotations of this start: 12 of 33
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Charianelly_9 (CS3), Damp_9 (CS3), GalacticEye_9 (CS3), Guillaume_9 (CS3), Jormungandr_9 (CS3), Luker_9 (CS3), Minos_9 (CS3), MrWormie_9 (CS3), Newt_9 (CS3), Nimi13_9 (CS3), Sticker17_9 (CS3), Teal_9 (CS3),

Start 13:
• Found in 9 of 34 (26.5%) of genes in pham
• Manual Annotations of this start: 1 of 33
• Called 11.1% of time when present
• Phage (with cluster) where this start called: BENtherdunthat_35 (DN1),

Start 14:
• Found in 9 of 34 (26.5%) of genes in pham
• Manual Annotations of this start: 8 of 33
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Asapag_34 (DN1), Birdsong_34 (DN), BotCity_35 (DN), Frickyeah_32 (DN1), Getalong_35 (DN1), Horus_34 (DN1), Kuwabara_33 (DN4), Leroy_34 (DN1), Periwinkle_36 (DN1),

Start 30:
• Found in 2 of 34 (5.9%) of genes in pham
• Manual Annotations of this start: 2 of 33
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Confidence_29 (CY1), Posh_31 (CY4),

Start 38:
• Found in 11 of 34 (32.4%) of genes in pham
• Manual Annotations of this start: 2 of 33
• Called 18.2% of time when present
• Phage (with cluster) where this start called: Annalisa_28 (CZ4), Bunnybear_26 (CZ),

Start 39:
• Found in 1 of 34 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 33
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Schnabeltier_29 (DB),

Start 50:
• Found in 1 of 34 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 33
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Stormageddon_18 (DX),

Summary by clusters:

There are 11 clusters represented in this pham: DN, CY1, DN4, CY4, DB, CZ4, CZ, DN1, DX, CV, CS3,

Info for manual annotations of cluster CS3:
•Start number 11 was manually annotated 12 times for cluster CS3.

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

Info for manual annotations of cluster CY1:
•Start number 30 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY4:
•Start number 30 was manually annotated 1 time for cluster CY4.

Info for manual annotations of cluster CZ:
•Start number 38 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ4:
•Start number 38 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster DB:
•Start number 39 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DN:
•Start number 14 was manually annotated 2 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 13 was manually annotated 1 time for cluster DN1.
•Start number 14 was manually annotated 5 times for cluster DN1.

Info for manual annotations of cluster DN4:
•Start number 14 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DX:
•Start number 50 was manually annotated 1 time for cluster DX.

Gene Information:

Gene: Annalisa_28 Start: 23307, Stop: 25346, Start Num: 38
Candidate Starts for Annalisa_28:

(10, 23130), (24, 23211), (28, 23235), (Start: 38 @23307 has 2 MA's), (77, 23715), (80, 23790), (84, 24003), (88, 24075), (90, 24102), (92, 24147), (98, 24345), (99, 24378), (101, 24396), (102, 24402), (104, 24453), (105, 24486), (106, 24501), (107, 24507), (110, 24558), (112, 24564), (114, 24585), (133, 24807), (134, 24813), (138, 24945), (139, 24954), (142, 24972), (144, 24981), (145, 25008), (152, 25098), (153, 25107), (160, 25161), (161, 25164), (162, 25179), (163, 25185),

Gene: Asapag_34 Start: 26338, Stop: 28506, Start Num: 14
Candidate Starts for Asapag_34:
(9, 26305), (Start: 13 @26335 has 1 MA's), (Start: 14 @26338 has 8 MA's), (18, 26350), (21, 26359), (29, 26410), (34, 26449), (37, 26467), (Start: 38 @26470 has 2 MA's), (41, 26527), (49, 26602), (53, 26626), (54, 26635), (59, 26677), (61, 26686), (62, 26692), (63, 26695), (77, 26875), (80, 26950), (84, 27163), (88, 27235), (90, 27262), (91, 27268), (92, 27307), (99, 27538), (102, 27562), (103, 27592), (106, 27661), (114, 27745), (115, 27766), (124, 27880), (125, 27889), (131, 27949), (133, 27967), (141, 28129), (144, 28141), (145, 28168), (149, 28228), (150, 28246), (151, 28255), (158, 28300), (160, 28321), (161, 28324), (164, 28348), (169, 28393), (172, 28459), (173, 28468), (174, 28477),

Gene: BENtherdunthat_35 Start: 25903, Stop: 28089, Start Num: 13
Candidate Starts for BENtherdunthat_35:
(9, 25870), (12, 25900), (Start: 13 @25903 has 1 MA's), (17, 25915), (20, 25924), (29, 25975), (32, 26014), (35, 26032), (36, 26035), (48, 26167), (51, 26191), (53, 26200), (59, 26242), (61, 26251), (62, 26257), (63, 26260), (77, 26440), (80, 26515), (90, 26827), (95, 27001), (97, 27055), (98, 27070), (100, 27106), (101, 27121), (102, 27127), (105, 27211), (108, 27253), (111, 27286), (112, 27289), (113, 27301), (114, 27310), (118, 27355), (119, 27364), (120, 27400), (121, 27418), (128, 27472), (130, 27493), (132, 27523), (138, 27679), (139, 27688), (147, 27778), (156, 27871), (160, 27904), (161, 27907), (170, 27997), (173, 28051),

Gene: Birdsong_34 Start: 26020, Stop: 28188, Start Num: 14
Candidate Starts for Birdsong_34:
(Start: 14 @26020 has 8 MA's), (18, 26032), (21, 26041), (27, 26086), (29, 26092), (34, 26131), (37, 26149), (Start: 38 @26152 has 2 MA's), (41, 26209), (49, 26284), (53, 26308), (54, 26317), (59, 26359), (61, 26368), (62, 26374), (63, 26377), (77, 26557), (80, 26632), (84, 26845), (88, 26917), (90, 26944), (91, 26950), (92, 26989), (99, 27220), (102, 27244), (103, 27274), (106, 27343), (114, 27427), (115, 27448), (124, 27562), (125, 27571), (130, 27607), (133, 27649), (142, 27814), (143, 27817), (144, 27823), (146, 27859), (147, 27886), (149, 27910), (150, 27928), (151, 27937), (159, 28000), (160, 28003), (161, 28006), (163, 28027), (166, 28048), (173, 28150),

Gene: BlingBling_30 Start: 25273, Stop: 27564, Start Num: 6
Candidate Starts for BlingBling_30:
(Start: 6 @25273 has 6 MA's), (7, 25291), (15, 25360), (19, 25372), (22, 25381), (23, 25384), (31, 25450), (46, 25597), (69, 25780), (77, 25915), (80, 25990), (81, 26014), (83, 26182), (88, 26275), (90, 26302), (92, 26347), (94, 26458), (95, 26476), (96, 26503), (98, 26545), (100, 26581), (101, 26596), (102, 26602), (104, 26653), (107, 26707), (112, 26764), (114, 26785), (129, 26953), (132, 26998), (139, 27163), (147, 27253), (154, 27319), (157, 27349), (160, 27379), (161, 27382), (173, 27526),

Gene: BotCity_35 Start: 25904, Stop: 28072, Start Num: 14
Candidate Starts for BotCity_35:
(9, 25871), (Start: 13 @25901 has 1 MA's), (Start: 14 @25904 has 8 MA's), (18, 25916), (21, 25925), (29, 25976), (34, 26015), (37, 26033), (Start: 38 @26036 has 2 MA's), (41, 26093), (49, 26168), (53, 26192), (54, 26201), (59, 26243), (61, 26252), (62, 26258), (63, 26261), (77, 26441), (80, 26516), (84, 26729), (88, 26801), (90, 26828), (91, 26834), (92, 26873), (99, 27104), (102, 27128), (103, 27158), (106, 27227), (114, 27311), (115, 27332), (124, 27446), (125, 27455), (131, 27515), (133, 27533), (141, 27695), (144, 27707), (145, 27734), (149, 27794), (150, 27812), (151, 27821), (158, 27866), (160, 27887), (161, 27890), (164, 27914), (169, 27959), (172, 28025), (173, 28034), (174, 28043),

Gene: Bunnybear_26 Start: 24720, Stop: 26759, Start Num: 38
Candidate Starts for Bunnybear_26:
(Start: 38 @24720 has 2 MA's), (44, 24801), (45, 24810), (56, 24879), (57, 24912), (65, 24957), (71, 25047), (77, 25128), (80, 25203), (84, 25416), (90, 25515), (98, 25758), (99, 25791), (101, 25809), (102, 25815), (105, 25899), (106, 25914), (107, 25920), (110, 25971), (112, 25977), (114, 25998), (133, 26220), (134, 26226), (138, 26358), (139, 26367), (142, 26385), (144, 26394), (145, 26421), (152, 26511), (153, 26520), (160, 26574), (161, 26577), (162, 26592), (163, 26598), (165, 26616),

Gene: Charianelly_9 Start: 10934, Stop: 13162, Start Num: 11
Candidate Starts for Charianelly_9:
(8, 10889), (Start: 11 @10934 has 12 MA's), (25, 10997), (26, 11006), (40, 11129), (52, 11243), (67, 11372), (73, 11459), (75, 11483), (77, 11525), (79, 11585), (80, 11600), (83, 11792), (90, 11912), (92, 11957), (98, 12155), (101, 12206), (102, 12212), (106, 12311), (109, 12350), (110, 12368), (112, 12374), (114, 12395), (117, 12434), (118, 12437), (122, 12506), (123, 12527), (124, 12530), (126, 12542), (130, 12575), (133, 12617), (139, 12764), (142, 12782), (147, 12854), (157, 12947), (160, 12977), (161, 12980), (166, 13022), (171, 13076), (173, 13124),

Gene: Confidence_29 Start: 24635, Stop: 26650, Start Num: 30
Candidate Starts for Confidence_29:
(Start: 30 @24635 has 2 MA's), (64, 24896), (66, 24923), (68, 24944), (69, 24950), (72, 25007), (83, 25268), (87, 25328), (90, 25388), (91, 25394), (92, 25433), (95, 25562), (96, 25589), (101, 25682), (102, 25688), (110, 25844), (112, 25850), (114, 25871), (125, 26018), (128, 26033), (129, 26039), (130, 26054), (132, 26084), (147, 26339), (157, 26435), (160, 26465), (161, 26468), (162, 26483), (168, 26534),

Gene: Damp_9 Start: 10098, Stop: 12326, Start Num: 11
Candidate Starts for Damp_9:
(8, 10053), (Start: 11 @10098 has 12 MA's), (25, 10161), (26, 10170), (40, 10293), (52, 10407), (67, 10536), (73, 10623), (75, 10647), (77, 10689), (79, 10749), (80, 10764), (83, 10956), (90, 11076), (92, 11121), (98, 11319), (101, 11370), (102, 11376), (106, 11475), (109, 11514), (110, 11532), (112, 11538), (114, 11559), (117, 11598), (118, 11601), (122, 11670), (123, 11691), (124, 11694), (126, 11706), (130, 11739), (133, 11781), (139, 11928), (142, 11946), (147, 12018), (157, 12111), (160, 12141), (161, 12144), (166, 12186), (171, 12240), (173, 12288),

Gene: Frickyeah_32 Start: 24439, Stop: 26607, Start Num: 14
Candidate Starts for Frickyeah_32:
(2, 24265), (3, 24337), (5, 24352), (9, 24406), (Start: 13 @24436 has 1 MA's), (Start: 14 @24439 has 8 MA's), (18, 24451), (21, 24460), (29, 24511), (34, 24550), (37, 24568), (Start: 38 @24571 has 2 MA's), (41, 24628), (49, 24703), (53, 24727), (54, 24736), (59, 24778), (61, 24787), (62, 24793), (63, 24796), (77, 24976), (80, 25051), (84, 25264), (88, 25336), (90, 25363), (91, 25369), (92, 25408), (99, 25639), (102, 25663), (103, 25693), (106, 25762), (114, 25846), (115, 25867), (124, 25981), (125, 25990), (131, 26050), (133, 26068), (141, 26230), (144, 26242), (145, 26269), (149, 26329), (150, 26347), (151, 26356), (158, 26401), (160, 26422), (161, 26425), (164, 26449), (167, 26476), (169, 26494), (172, 26560), (173, 26569), (174, 26578),

Gene: GalacticEye_9 Start: 10923, Stop: 13151, Start Num: 11
Candidate Starts for GalacticEye_9:
(8, 10878), (Start: 11 @10923 has 12 MA's), (25, 10986), (26, 10995), (40, 11118), (52, 11232), (67, 11361), (73, 11448), (75, 11472), (77, 11514), (79, 11574), (80, 11589), (83, 11781), (90, 11901), (92, 11946), (98, 12144), (101, 12195), (102, 12201), (106, 12300), (109, 12339), (110, 12357), (112, 12363), (114, 12384), (117, 12423), (118, 12426), (122, 12495), (123, 12516), (124, 12519), (126, 12531), (130, 12564), (133, 12606), (139, 12753), (142, 12771), (147, 12843), (157, 12936), (160,

12966), (161, 12969), (166, 13011), (171, 13065), (173, 13113),

Gene: Getalong_35 Start: 27115, Stop: 29283, Start Num: 14
Candidate Starts for Getalong_35:
(9, 27082), (Start: 13 @27112 has 1 MA's), (Start: 14 @27115 has 8 MA's), (18, 27127), (21, 27136), (29, 27187), (34, 27226), (37, 27244), (Start: 38 @27247 has 2 MA's), (41, 27304), (49, 27379), (53, 27403), (54, 27412), (59, 27454), (61, 27463), (62, 27469), (63, 27472), (77, 27652), (80, 27727), (84, 27940), (88, 28012), (90, 28039), (91, 28045), (92, 28084), (99, 28315), (102, 28339), (103, 28369), (106, 28438), (114, 28522), (115, 28543), (124, 28657), (125, 28666), (131, 28726), (133, 28744), (141, 28906), (144, 28918), (145, 28945), (149, 29005), (150, 29023), (151, 29032), (158, 29077), (160, 29098), (161, 29101), (164, 29125), (169, 29170), (172, 29236), (173, 29245), (174, 29254),

Gene: Guacamole_30 Start: 25271, Stop: 27562, Start Num: 6
Candidate Starts for Guacamole_30:
(Start: 6 @25271 has 6 MA's), (7, 25289), (16, 25361), (22, 25379), (23, 25382), (33, 25463), (42, 25559), (43, 25574), (61, 25703), (68, 25766), (69, 25778), (70, 25781), (77, 25913), (80, 25988), (81, 26012), (83, 26180), (88, 26273), (90, 26300), (92, 26345), (94, 26456), (95, 26474), (96, 26501), (98, 26543), (100, 26579), (101, 26594), (102, 26600), (110, 26756), (112, 26762), (114, 26783), (129, 26951), (139, 27161), (147, 27251), (157, 27347), (160, 27377), (161, 27380), (173, 27524),

Gene: Guillaume_9 Start: 10934, Stop: 13183, Start Num: 11
Candidate Starts for Guillaume_9:
(8, 10889), (Start: 11 @10934 has 12 MA's), (25, 10997), (26, 11006), (40, 11129), (52, 11243), (67, 11372), (73, 11480), (75, 11504), (77, 11546), (79, 11606), (80, 11621), (83, 11813), (90, 11933), (92, 11978), (98, 12176), (101, 12227), (102, 12233), (106, 12332), (109, 12371), (110, 12389), (112, 12395), (114, 12416), (117, 12455), (118, 12458), (122, 12527), (123, 12548), (124, 12551), (126, 12563), (130, 12596), (133, 12638), (139, 12785), (142, 12803), (147, 12875), (157, 12968), (160, 12998), (161, 13001), (166, 13043), (171, 13097), (173, 13145),

Gene: Horus_34 Start: 26360, Stop: 28528, Start Num: 14
Candidate Starts for Horus_34:
(9, 26327), (Start: 13 @26357 has 1 MA's), (Start: 14 @26360 has 8 MA's), (18, 26372), (21, 26381), (29, 26432), (34, 26471), (37, 26489), (Start: 38 @26492 has 2 MA's), (41, 26549), (49, 26624), (53, 26648), (54, 26657), (59, 26699), (61, 26708), (62, 26714), (63, 26717), (77, 26897), (80, 26972), (84, 27185), (88, 27257), (90, 27284), (91, 27290), (92, 27329), (99, 27560), (102, 27584), (103, 27614), (106, 27683), (114, 27767), (115, 27788), (124, 27902), (125, 27911), (131, 27971), (133, 27989), (141, 28151), (144, 28163), (145, 28190), (149, 28250), (150, 28268), (151, 28277), (158, 28322), (160, 28343), (161, 28346), (164, 28370), (167, 28397), (169, 28415), (172, 28481), (173, 28490), (174, 28499),

Gene: Jalammah_32 Start: 26022, Stop: 28295, Start Num: 6
Candidate Starts for Jalammah_32:
(Start: 6 @26022 has 6 MA's), (7, 26040), (15, 26109), (19, 26121), (22, 26130), (23, 26133), (33, 26214), (42, 26310), (43, 26325), (46, 26346), (61, 26454), (80, 26739), (84, 26952), (88, 27024), (90, 27051), (91, 27057), (92, 27096), (99, 27327), (102, 27351), (103, 27381), (106, 27450), (110, 27507), (114, 27534), (115, 27555), (124, 27669), (125, 27678), (133, 27756), (141, 27918), (144, 27930), (145, 27957), (149, 28017), (150, 28035), (151, 28044), (158, 28089), (160, 28110), (161, 28113), (164, 28137), (169, 28182), (172, 28248), (173, 28257), (174, 28266),

Gene: JasperJr_30 Start: 25271, Stop: 27562, Start Num: 6
Candidate Starts for JasperJr_30:
(Start: 6 @25271 has 6 MA's), (7, 25289), (16, 25361), (22, 25379), (23, 25382), (33, 25463), (42, 25559), (43, 25574), (61, 25703), (68, 25766), (69, 25778), (70, 25781), (77, 25913), (80, 25988), (81,

26012), (83, 26180), (88, 26273), (90, 26300), (92, 26345), (94, 26456), (95, 26474), (96, 26501), (98, 26543), (100, 26579), (101, 26594), (102, 26600), (110, 26756), (112, 26762), (114, 26783), (129, 26951), (139, 27161), (147, 27251), (157, 27347), (160, 27377), (161, 27380), (173, 27524),

Gene: Jormungandr_9 Start: 10937, Stop: 13165, Start Num: 11
Candidate Starts for Jormungandr_9:
(8, 10892), (Start: 11 @10937 has 12 MA's), (25, 11000), (26, 11009), (40, 11132), (52, 11246), (67, 11375), (73, 11462), (75, 11486), (77, 11528), (79, 11588), (80, 11603), (83, 11795), (90, 11915), (92, 11960), (98, 12158), (101, 12209), (102, 12215), (106, 12314), (109, 12353), (110, 12371), (112, 12377), (114, 12398), (117, 12437), (118, 12440), (122, 12509), (123, 12530), (124, 12533), (126, 12545), (130, 12578), (133, 12620), (139, 12767), (142, 12785), (147, 12857), (157, 12950), (160, 12980), (161, 12983), (166, 13025), (171, 13079), (173, 13127),

Gene: Kuwabara_33 Start: 25711, Stop: 27840, Start Num: 14
Candidate Starts for Kuwabara_33:
(4, 25615), (9, 25678), (Start: 13 @25708 has 1 MA's), (Start: 14 @25711 has 8 MA's), (18, 25723), (21, 25732), (29, 25783), (34, 25822), (37, 25840), (Start: 38 @25843 has 2 MA's), (49, 25975), (54, 26008), (58, 26047), (61, 26059), (62, 26065), (63, 26068), (80, 26284), (84, 26497), (88, 26569), (90, 26596), (91, 26602), (92, 26641), (99, 26872), (102, 26896), (103, 26926), (106, 26995), (114, 27079), (115, 27100), (124, 27214), (125, 27223), (130, 27259), (133, 27301), (142, 27466), (143, 27469), (144, 27475), (146, 27511), (147, 27538), (149, 27562), (150, 27580), (151, 27589), (159, 27652), (160, 27655), (161, 27658), (163, 27679), (166, 27700), (173, 27802),

Gene: Leroy_34 Start: 26361, Stop: 28529, Start Num: 14
Candidate Starts for Leroy_34:
(9, 26328), (Start: 13 @26358 has 1 MA's), (Start: 14 @26361 has 8 MA's), (18, 26373), (21, 26382), (29, 26433), (34, 26472), (37, 26490), (Start: 38 @26493 has 2 MA's), (41, 26550), (49, 26625), (53, 26649), (54, 26658), (59, 26700), (61, 26709), (62, 26715), (63, 26718), (77, 26898), (80, 26973), (84, 27186), (88, 27258), (90, 27285), (91, 27291), (92, 27330), (99, 27561), (102, 27585), (103, 27615), (106, 27684), (114, 27768), (115, 27789), (124, 27903), (125, 27912), (131, 27972), (133, 27990), (141, 28152), (144, 28164), (145, 28191), (149, 28251), (150, 28269), (151, 28278), (158, 28323), (160, 28344), (161, 28347), (164, 28371), (167, 28398), (169, 28416), (172, 28482), (173, 28491), (174, 28500),

Gene: Luker_9 Start: 10917, Stop: 13145, Start Num: 11
Candidate Starts for Luker_9:
(8, 10872), (Start: 11 @10917 has 12 MA's), (25, 10980), (26, 10989), (40, 11112), (52, 11226), (67, 11355), (73, 11442), (75, 11466), (77, 11508), (79, 11568), (80, 11583), (83, 11775), (90, 11895), (92, 11940), (98, 12138), (101, 12189), (102, 12195), (106, 12294), (109, 12333), (110, 12351), (112, 12357), (114, 12378), (117, 12417), (118, 12420), (122, 12489), (123, 12510), (124, 12513), (126, 12525), (130, 12558), (133, 12600), (139, 12747), (142, 12765), (147, 12837), (155, 12915), (157, 12930), (160, 12960), (161, 12963), (166, 13005), (171, 13059), (173, 13107),

Gene: Minos_9 Start: 10923, Stop: 13151, Start Num: 11
Candidate Starts for Minos_9:
(8, 10878), (Start: 11 @10923 has 12 MA's), (25, 10986), (26, 10995), (40, 11118), (52, 11232), (67, 11361), (73, 11448), (75, 11472), (77, 11514), (79, 11574), (80, 11589), (83, 11781), (90, 11901), (92, 11946), (98, 12144), (101, 12195), (102, 12201), (106, 12300), (109, 12339), (110, 12357), (112, 12363), (114, 12384), (117, 12423), (118, 12426), (122, 12495), (123, 12516), (124, 12519), (126, 12531), (130, 12564), (133, 12606), (139, 12753), (142, 12771), (147, 12843), (157, 12936), (160, 12966), (161, 12969), (166, 13011), (171, 13065), (173, 13113),

Gene: MintFen_30 Start: 25225, Stop: 27615, Start Num: 6

Candidate Starts for MintFen_30:
(Start: 6 @25225 has 6 MA's), (7, 25243), (16, 25315), (22, 25333), (23, 25336), (42, 25513), (43, 25528), (61, 25657), (69, 25732), (84, 26272), (88, 26344), (90, 26371), (91, 26377), (92, 26416), (99, 26647), (102, 26671), (103, 26701), (106, 26770), (110, 26827), (114, 26854), (115, 26875), (116, 26887), (124, 26989), (125, 26998), (131, 27058), (133, 27076), (141, 27238), (144, 27250), (145, 27277), (149, 27337), (150, 27355), (151, 27364), (158, 27409), (160, 27430), (161, 27433), (164, 27457), (169, 27502), (172, 27568), (173, 27577), (174, 27586),

Gene: MrWormie_9 Start: 10087, Stop: 12315, Start Num: 11
Candidate Starts for MrWormie_9:
(8, 10042), (Start: 11 @10087 has 12 MA's), (25, 10150), (26, 10159), (40, 10282), (52, 10396), (67, 10525), (73, 10612), (75, 10636), (77, 10678), (79, 10738), (80, 10753), (83, 10945), (90, 11065), (92, 11110), (98, 11308), (101, 11359), (102, 11365), (106, 11464), (109, 11503), (110, 11521), (112, 11527), (114, 11548), (117, 11587), (118, 11590), (122, 11659), (123, 11680), (124, 11683), (126, 11695), (130, 11728), (133, 11770), (139, 11917), (142, 11935), (147, 12007), (157, 12100), (160, 12130), (161, 12133), (166, 12175), (171, 12229), (173, 12277),

Gene: Newt_9 Start: 10934, Stop: 13162, Start Num: 11
Candidate Starts for Newt_9:
(8, 10889), (Start: 11 @10934 has 12 MA's), (25, 10997), (26, 11006), (40, 11129), (52, 11243), (67, 11372), (73, 11459), (75, 11483), (77, 11525), (79, 11585), (80, 11600), (83, 11792), (90, 11912), (92, 11957), (98, 12155), (101, 12206), (102, 12212), (106, 12311), (109, 12350), (110, 12368), (112, 12374), (114, 12395), (117, 12434), (118, 12437), (122, 12506), (123, 12527), (124, 12530), (126, 12542), (130, 12575), (133, 12617), (139, 12764), (142, 12782), (147, 12854), (157, 12947), (160, 12977), (161, 12980), (166, 13022), (171, 13076), (173, 13124),

Gene: Nimi13_9 Start: 10935, Stop: 13163, Start Num: 11
Candidate Starts for Nimi13_9:
(8, 10890), (Start: 11 @10935 has 12 MA's), (25, 10998), (26, 11007), (40, 11130), (52, 11244), (67, 11373), (73, 11460), (75, 11484), (77, 11526), (79, 11586), (80, 11601), (83, 11793), (90, 11913), (92, 11958), (98, 12156), (101, 12207), (102, 12213), (106, 12312), (109, 12351), (110, 12369), (112, 12375), (114, 12396), (117, 12435), (118, 12438), (122, 12507), (123, 12528), (124, 12531), (126, 12543), (130, 12576), (133, 12618), (139, 12765), (142, 12783), (147, 12855), (157, 12948), (160, 12978), (161, 12981), (166, 13023), (171, 13077), (173, 13125),

Gene: Periwinkle_36 Start: 26805, Stop: 28973, Start Num: 14
Candidate Starts for Periwinkle_36:
(9, 26772), (Start: 13 @26802 has 1 MA's), (Start: 14 @26805 has 8 MA's), (18, 26817), (21, 26826), (29, 26877), (34, 26916), (37, 26934), (Start: 38 @26937 has 2 MA's), (41, 26994), (49, 27069), (53, 27093), (54, 27102), (59, 27144), (61, 27153), (62, 27159), (63, 27162), (77, 27342), (80, 27417), (84, 27630), (88, 27702), (90, 27729), (91, 27735), (92, 27774), (99, 28005), (102, 28029), (103, 28059), (106, 28128), (114, 28212), (115, 28233), (124, 28347), (125, 28356), (131, 28416), (133, 28434), (141, 28596), (144, 28608), (145, 28635), (149, 28695), (150, 28713), (151, 28722), (158, 28767), (160, 28788), (161, 28791), (164, 28815), (167, 28842), (169, 28860), (172, 28926), (173, 28935), (174, 28944),

Gene: Posh_31 Start: 25600, Stop: 27681, Start Num: 30
Candidate Starts for Posh_31:
(Start: 30 @25600 has 2 MA's), (60, 25846), (64, 25861), (66, 25888), (68, 25909), (69, 25915), (72, 25972), (77, 26032), (80, 26107), (83, 26299), (88, 26392), (90, 26419), (92, 26464), (94, 26575), (95, 26593), (96, 26620), (98, 26662), (100, 26698), (101, 26713), (102, 26719), (112, 26881), (114, 26902), (129, 27070), (139, 27280), (147, 27370), (157, 27466), (160, 27496), (161, 27499), (173, 27643),

Gene: Schnabeltier_29 Start: 24627, Stop: 26651, Start Num: 39
Candidate Starts for Schnabeltier_29:
(Start: 39 @24627 has 1 MA's), (57, 24804), (74, 24969), (77, 25020), (80, 25095), (84, 25308), (88, 25380), (90, 25407), (91, 25413), (92, 25452), (99, 25683), (102, 25707), (103, 25737), (106, 25806), (110, 25863), (114, 25890), (115, 25911), (116, 25923), (124, 26025), (125, 26034), (131, 26094), (133, 26112), (137, 26235), (141, 26274), (144, 26286), (145, 26313), (149, 26373), (150, 26391), (151, 26400), (158, 26445), (160, 26466), (161, 26469), (164, 26493), (169, 26538), (172, 26604), (173, 26613), (174, 26622),

Gene: Sticker17_9 Start: 10934, Stop: 13162, Start Num: 11
Candidate Starts for Sticker17_9:
(8, 10889), (Start: 11 @10934 has 12 MA's), (25, 10997), (26, 11006), (40, 11129), (52, 11243), (67, 11372), (73, 11459), (75, 11483), (77, 11525), (79, 11585), (80, 11600), (83, 11792), (90, 11912), (92, 11957), (98, 12155), (101, 12206), (102, 12212), (106, 12311), (109, 12350), (110, 12368), (112, 12374), (114, 12395), (117, 12434), (118, 12437), (122, 12506), (123, 12527), (124, 12530), (126, 12542), (130, 12575), (133, 12617), (139, 12764), (142, 12782), (147, 12854), (157, 12947), (160, 12977), (161, 12980), (166, 13022), (171, 13076), (173, 13124),

Gene: Stormageddon_18 Start: 21743, Stop: 23659, Start Num: 50
Candidate Starts for Stormageddon_18:
(Start: 50 @21743 has 1 MA's), (55, 21770), (76, 21992), (78, 22073), (80, 22106), (83, 22295), (85, 22331), (86, 22349), (89, 22400), (90, 22406), (93, 22493), (95, 22580), (96, 22607), (98, 22649), (101, 22703), (102, 22709), (106, 22808), (112, 22871), (122, 23006), (127, 23045), (130, 23075), (133, 23117), (135, 23159), (138, 23255), (140, 23276), (142, 23282), (144, 23291), (145, 23318), (148, 23360), (157, 23450), (160, 23477), (165, 23519), (172, 23615), (173, 23624), (174, 23633),

Gene: Teal_9 Start: 10911, Stop: 13139, Start Num: 11
Candidate Starts for Teal_9:
(8, 10866), (Start: 11 @10911 has 12 MA's), (25, 10974), (26, 10983), (40, 11106), (52, 11220), (67, 11349), (73, 11436), (75, 11460), (77, 11502), (79, 11562), (80, 11577), (83, 11769), (90, 11889), (92, 11934), (98, 12132), (101, 12183), (102, 12189), (106, 12288), (109, 12327), (110, 12345), (112, 12351), (114, 12372), (117, 12411), (118, 12414), (122, 12483), (123, 12504), (124, 12507), (126, 12519), (130, 12552), (133, 12594), (139, 12741), (142, 12759), (147, 12831), (157, 12924), (160, 12954), (161, 12957), (166, 12999), (171, 13053), (173, 13101),

Gene: Wisp_29 Start: 24983, Stop: 27256, Start Num: 6
Candidate Starts for Wisp_29:
(1, 24806), (Start: 6 @24983 has 6 MA's), (7, 25001), (15, 25070), (19, 25082), (22, 25091), (23, 25094), (31, 25160), (47, 25307), (69, 25490), (82, 25775), (84, 25913), (88, 25985), (90, 26012), (92, 26057), (98, 26255), (99, 26288), (101, 26306), (102, 26312), (104, 26363), (105, 26396), (107, 26417), (110, 26468), (112, 26474), (114, 26495), (132, 26705), (133, 26717), (134, 26723), (136, 26783), (138, 26855), (139, 26864), (142, 26882), (144, 26891), (145, 26918), (152, 27008), (158, 27050), (160, 27071), (161, 27074), (162, 27089), (163, 27095), (165, 27113),