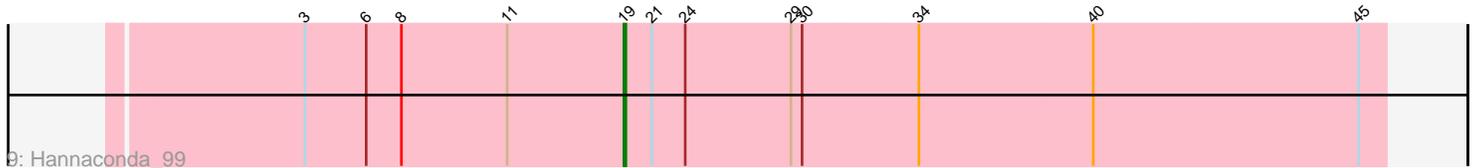
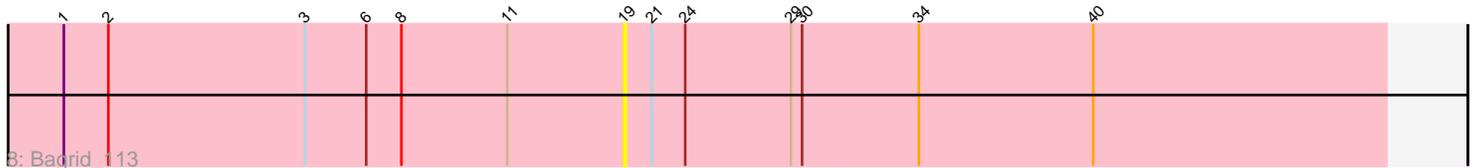
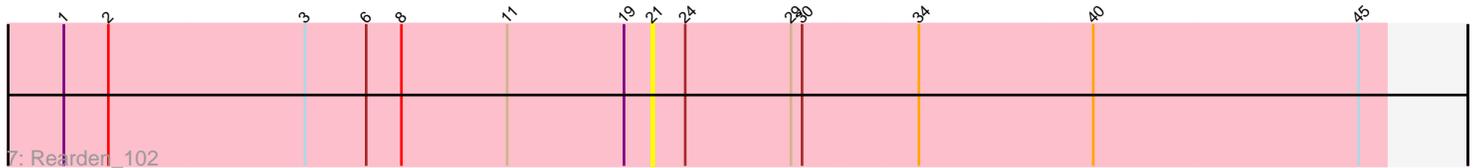
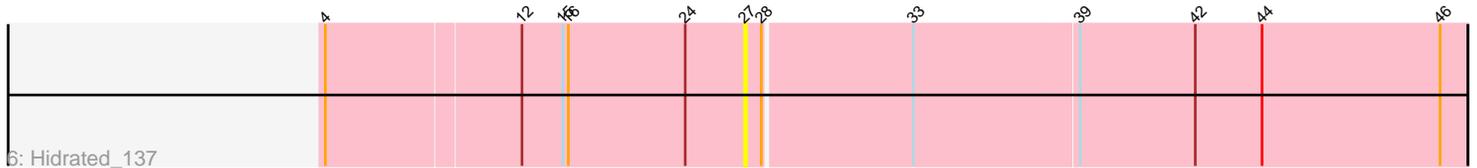
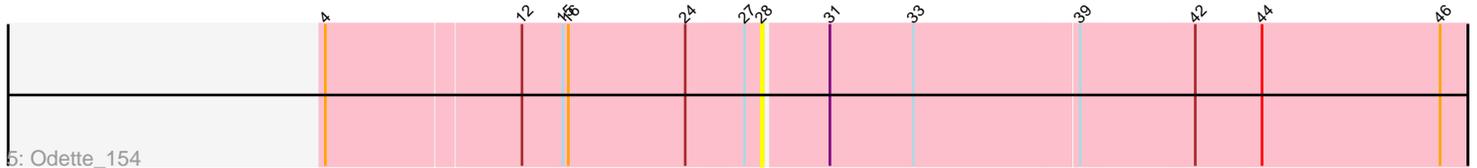
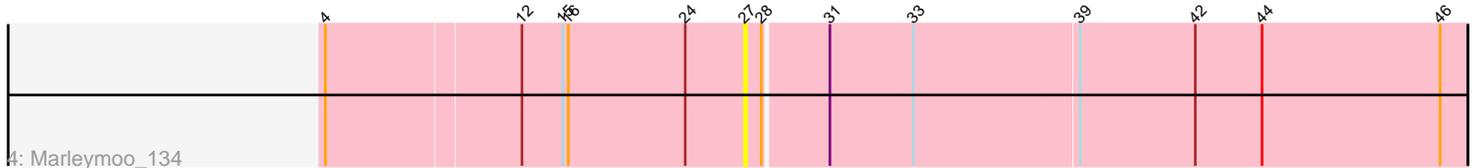
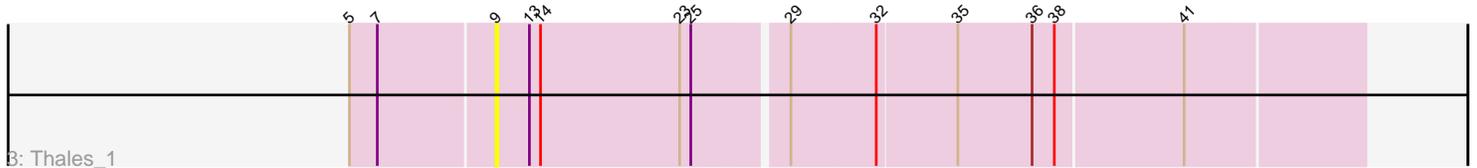
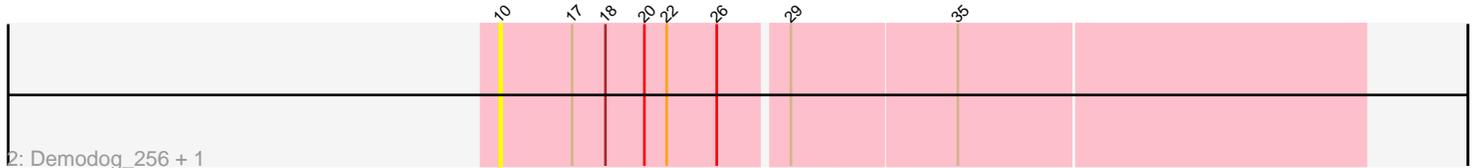
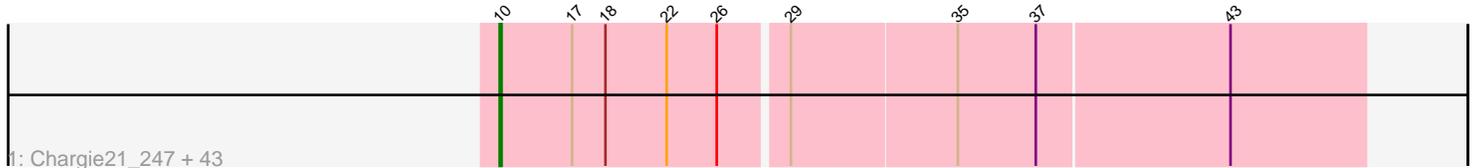


# Pham 291231



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 291231 Report

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

Pham number 291231 has 53 members, 17 are drafts.

Phages represented in each track:

- Track 1 : Chargie21\_247, Trinitium\_246, JPickles\_247, ZygoTaiga\_246, Basquiat\_247, Lee7\_249, Erdmann\_251, StubbySaigey\_256, Darko\_249, PurduePete\_250, PharkleMinkus\_252, FudgeTart\_245, Ablatia\_249, Asterius\_250, Gizmo\_255, Bowman\_247, Bread\_246, OrediggerDelux\_245, Primadonna\_244, BananaFence\_247, McGee\_251, Astraea\_245, Janiyra\_253, Fixie\_249, Bonray\_252, Cleatunium\_242, Cactojaque\_244, Blackbrain\_248, Maby2021\_250, BobaPhatt\_241, SrishMeg2525\_247, ErnieJ\_243, Ading\_252, Shrimp\_252, Yucca\_250, EmToTheThree\_250, Teardrop\_248, Issimir\_243, TinyTim\_248, Belieber\_242, Salacia\_251, Specks\_254, Morizzled23\_247, FoxtrotP1\_248
- Track 2 : Demodog\_256, Concombre\_255
- Track 3 : Thales\_1
- Track 4 : Marleymoo\_134
- Track 5 : Odette\_154
- Track 6 : Hidrated\_137
- Track 7 : Rearden\_102
- Track 8 : Bagrid\_113
- Track 9 : Hannaconda\_99

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

The start number called the most often in the published annotations is 10, it was called in 35 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia\_249, Ading\_252, Asterius\_250, Astraea\_245, BananaFence\_247, Basquiat\_247, Belieber\_242, Blackbrain\_248, BobaPhatt\_241, Bonray\_252, Bowman\_247, Bread\_246, Cactojaque\_244, Chargie21\_247, Cleatunium\_242, Concombre\_255, Darko\_249, Demodog\_256, EmToTheThree\_250, Erdmann\_251, ErnieJ\_243, Fixie\_249, FoxtrotP1\_248, FudgeTart\_245, Gizmo\_255, Issimir\_243, JPickles\_247, Janiyra\_253, Lee7\_249, Maby2021\_250, McGee\_251, Morizzled23\_247, OrediggerDelux\_245, PharkleMinkus\_252, Primadonna\_244, PurduePete\_250, Salacia\_251, Shrimp\_252, Specks\_254, SrishMeg2525\_247, StubbySaigey\_256, Teardrop\_248, TinyTim\_248, Trinitium\_246, Yucca\_250, ZygoTaiga\_246,

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

- 

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

- Bagrid\_113, Hannaconda\_99, Hidrated\_137, Marleymoo\_134, Odette\_154, Rearden\_102, Thales\_1,

### Summary by start number:

Start 9:

- Found in 1 of 53 ( 1.9% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Thales\_1 (DQ),

Start 10:

- Found in 46 of 53 ( 86.8% ) of genes in pham
- Manual Annotations of this start: 35 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia\_249 (C1), Ading\_252 (C1), Asterius\_250 (C1), Astraea\_245 (C1), BananaFence\_247 (C1), Basquiat\_247 (C1), Belieber\_242 (C1), Blackbrain\_248 (C1), BobaPhatt\_241 (C1), Bonray\_252 (C1), Bowman\_247 (C1), Bread\_246 (C1), Cactojaque\_244 (C1), Chargie21\_247 (C1), Cleatunium\_242 (C1), Concombre\_255 (C1), Darko\_249 (C1), Demodog\_256 (C1), EmToTheThree\_250 (C1), Erdmann\_251 (C1), ErnieJ\_243 (C1), Fixie\_249 (C1), FoxtrotP1\_248 (C1), FudgeTart\_245 (C1), Gizmo\_255 (C1), Issimir\_243 (C1), JPickles\_247 (C1), Janiyra\_253 (C1), Lee7\_249 (C1), Maby2021\_250 (C1), McGee\_251 (C1), Morizzled23\_247 (C1), OrediggerDelux\_245 (C1), PharkleMinkus\_252 (C1), Primadonna\_244 (C1), PurduePete\_250 (C1), Salacia\_251 (C1), Shrimp\_252 (C1), Specks\_254 (C1), SrishMeg2525\_247 (C1), StubbySaigey\_256 (C1), Teardrop\_248 (C1), TinyTim\_248 (C1), Trinitium\_246 (C1), Yucca\_250 (C1), ZygoTaiga\_246 (C1),

Start 19:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- Manual Annotations of this start: 1 of 36
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Bagrid\_113 (J), Hannaconda\_99 (J),

Start 21:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Rearden\_102 (J),

Start 27:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Hidrated\_137 (J), Marleymoo\_134 (J),

Start 28:

- Found in 3 of 53 ( 5.7% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Odette\_154 (J),

### **Summary by clusters:**

There are 3 clusters represented in this pham: C1, J, DQ,

Info for manual annotations of cluster C1:

- Start number 10 was manually annotated 35 times for cluster C1.

Info for manual annotations of cluster J:

- Start number 19 was manually annotated 1 time for cluster J.

### **Gene Information:**

Gene: Ablatia\_249 Start: 141923, Stop: 142372, Start Num: 10

Candidate Starts for Ablatia\_249:

(Start: 10 @141923 has 35 MA's), (17, 141962), (18, 141980), (22, 142013), (26, 142040), (29, 142073), (35, 142160), (37, 142202), (43, 142301),

Gene: Ading\_252 Start: 144356, Stop: 144805, Start Num: 10

Candidate Starts for Ading\_252:

(Start: 10 @144356 has 35 MA's), (17, 144395), (18, 144413), (22, 144446), (26, 144473), (29, 144506), (35, 144593), (37, 144635), (43, 144734),

Gene: Asterius\_250 Start: 142368, Stop: 142817, Start Num: 10

Candidate Starts for Asterius\_250:

(Start: 10 @142368 has 35 MA's), (17, 142407), (18, 142425), (22, 142458), (26, 142485), (29, 142518), (35, 142605), (37, 142647), (43, 142746),

Gene: Astraea\_245 Start: 141563, Stop: 142012, Start Num: 10

Candidate Starts for Astraea\_245:

(Start: 10 @141563 has 35 MA's), (17, 141602), (18, 141620), (22, 141653), (26, 141680), (29, 141713), (35, 141800), (37, 141842), (43, 141941),

Gene: Bagrid\_113 Start: 63671, Stop: 64075, Start Num: 19

Candidate Starts for Bagrid\_113:

(1, 63371), (2, 63395), (3, 63500), (6, 63533), (8, 63551), (11, 63608), (Start: 19 @63671 has 1 MA's), (21, 63686), (24, 63704), (29, 63761), (30, 63767), (34, 63827), (40, 63920),

Gene: BananaFence\_247 Start: 142192, Stop: 142641, Start Num: 10

Candidate Starts for BananaFence\_247:

(Start: 10 @142192 has 35 MA's), (17, 142231), (18, 142249), (22, 142282), (26, 142309), (29, 142342), (35, 142429), (37, 142471), (43, 142570),

Gene: Basquiat\_247 Start: 140478, Stop: 140927, Start Num: 10

Candidate Starts for Basquiat\_247:

(Start: 10 @140478 has 35 MA's), (17, 140517), (18, 140535), (22, 140568), (26, 140595), (29, 140628), (35, 140715), (37, 140757), (43, 140856),

Gene: Belieber\_242 Start: 140605, Stop: 141054, Start Num: 10

Candidate Starts for Belieber\_242:

(Start: 10 @140605 has 35 MA's), (17, 140644), (18, 140662), (22, 140695), (26, 140722), (29, 140755), (35, 140842), (37, 140884), (43, 140983),

Gene: Blackbrain\_248 Start: 142255, Stop: 142704, Start Num: 10

Candidate Starts for Blackbrain\_248:

(Start: 10 @142255 has 35 MA's), (17, 142294), (18, 142312), (22, 142345), (26, 142372), (29, 142405), (35, 142492), (37, 142534), (43, 142633),

Gene: BobaPhatt\_241 Start: 141373, Stop: 141822, Start Num: 10

Candidate Starts for BobaPhatt\_241:

(Start: 10 @141373 has 35 MA's), (17, 141412), (18, 141430), (22, 141463), (26, 141490), (29, 141523), (35, 141610), (37, 141652), (43, 141751),

Gene: Bonray\_252 Start: 144055, Stop: 144504, Start Num: 10

Candidate Starts for Bonray\_252:

(Start: 10 @144055 has 35 MA's), (17, 144094), (18, 144112), (22, 144145), (26, 144172), (29, 144205), (35, 144292), (37, 144334), (43, 144433),

Gene: Bowman\_247 Start: 143170, Stop: 143619, Start Num: 10

Candidate Starts for Bowman\_247:

(Start: 10 @143170 has 35 MA's), (17, 143209), (18, 143227), (22, 143260), (26, 143287), (29, 143320), (35, 143407), (37, 143449), (43, 143548),

Gene: Bread\_246 Start: 142022, Stop: 142471, Start Num: 10

Candidate Starts for Bread\_246:

(Start: 10 @142022 has 35 MA's), (17, 142061), (18, 142079), (22, 142112), (26, 142139), (29, 142172), (35, 142259), (37, 142301), (43, 142400),

Gene: Cactojaque\_244 Start: 141201, Stop: 141650, Start Num: 10

Candidate Starts for Cactojaque\_244:

(Start: 10 @141201 has 35 MA's), (17, 141240), (18, 141258), (22, 141291), (26, 141318), (29, 141351), (35, 141438), (37, 141480), (43, 141579),

Gene: Chargie21\_247 Start: 140478, Stop: 140927, Start Num: 10

Candidate Starts for Chargie21\_247:

(Start: 10 @140478 has 35 MA's), (17, 140517), (18, 140535), (22, 140568), (26, 140595), (29, 140628), (35, 140715), (37, 140757), (43, 140856),

Gene: Cleatunium\_242 Start: 141882, Stop: 142331, Start Num: 10

Candidate Starts for Cleatunium\_242:

(Start: 10 @141882 has 35 MA's), (17, 141921), (18, 141939), (22, 141972), (26, 141999), (29, 142032), (35, 142119), (37, 142161), (43, 142260),

Gene: Concombres\_255 Start: 144217, Stop: 144666, Start Num: 10

Candidate Starts for Concombres\_255:

(Start: 10 @144217 has 35 MA's), (17, 144256), (18, 144274), (20, 144295), (22, 144307), (26, 144334), (29, 144367), (35, 144454),

Gene: Darko\_249 Start: 142196, Stop: 142645, Start Num: 10

Candidate Starts for Darko\_249:

(Start: 10 @142196 has 35 MA's), (17, 142235), (18, 142253), (22, 142286), (26, 142313), (29, 142346), (35, 142433), (37, 142475), (43, 142574),

Gene: Demodog\_256 Start: 144227, Stop: 144676, Start Num: 10

Candidate Starts for Demodog\_256:

(Start: 10 @144227 has 35 MA's), (17, 144266), (18, 144284), (20, 144305), (22, 144317), (26, 144344), (29, 144377), (35, 144464),

Gene: EmToTheThree\_250 Start: 143104, Stop: 143553, Start Num: 10

Candidate Starts for EmToTheThree\_250:

(Start: 10 @143104 has 35 MA's), (17, 143143), (18, 143161), (22, 143194), (26, 143221), (29, 143254), (35, 143341), (37, 143383), (43, 143482),

Gene: Erdmann\_251 Start: 143072, Stop: 143521, Start Num: 10

Candidate Starts for Erdmann\_251:

(Start: 10 @143072 has 35 MA's), (17, 143111), (18, 143129), (22, 143162), (26, 143189), (29, 143222), (35, 143309), (37, 143351), (43, 143450),

Gene: ErnieJ\_243 Start: 139900, Stop: 140349, Start Num: 10

Candidate Starts for ErnieJ\_243:

(Start: 10 @139900 has 35 MA's), (17, 139939), (18, 139957), (22, 139990), (26, 140017), (29, 140050), (35, 140137), (37, 140179), (43, 140278),

Gene: Fixie\_249 Start: 143337, Stop: 143786, Start Num: 10

Candidate Starts for Fixie\_249:

(Start: 10 @143337 has 35 MA's), (17, 143376), (18, 143394), (22, 143427), (26, 143454), (29, 143487), (35, 143574), (37, 143616), (43, 143715),

Gene: FoxtrotP1\_248 Start: 143658, Stop: 144107, Start Num: 10

Candidate Starts for FoxtrotP1\_248:

(Start: 10 @143658 has 35 MA's), (17, 143697), (18, 143715), (22, 143748), (26, 143775), (29, 143808), (35, 143895), (37, 143937), (43, 144036),

Gene: FudgeTart\_245 Start: 142162, Stop: 142611, Start Num: 10

Candidate Starts for FudgeTart\_245:

(Start: 10 @142162 has 35 MA's), (17, 142201), (18, 142219), (22, 142252), (26, 142279), (29, 142312), (35, 142399), (37, 142441), (43, 142540),

Gene: Gizmo\_255 Start: 144989, Stop: 145438, Start Num: 10

Candidate Starts for Gizmo\_255:

(Start: 10 @144989 has 35 MA's), (17, 145028), (18, 145046), (22, 145079), (26, 145106), (29, 145139), (35, 145226), (37, 145268), (43, 145367),

Gene: Hannaconda\_99 Start: 57411, Stop: 57815, Start Num: 19

Candidate Starts for Hannaconda\_99:

(3, 57240), (6, 57273), (8, 57291), (11, 57348), (Start: 19 @57411 has 1 MA's), (21, 57426), (24, 57444), (29, 57501), (30, 57507), (34, 57567), (40, 57660), (45, 57801),

Gene: Hidrated\_137 Start: 78910, Stop: 79290, Start Num: 27

Candidate Starts for Hidrated\_137:

(4, 78691), (12, 78793), (15, 78814), (16, 78817), (24, 78880), (27, 78910), (28, 78919), (33, 78997), (39, 79084), (42, 79144), (44, 79180), (46, 79276),

Gene: Issimir\_243 Start: 142261, Stop: 142710, Start Num: 10

Candidate Starts for Issimir\_243:

(Start: 10 @142261 has 35 MA's), (17, 142300), (18, 142318), (22, 142351), (26, 142378), (29, 142411), (35, 142498), (37, 142540), (43, 142639),

Gene: JPickles\_247 Start: 141311, Stop: 141760, Start Num: 10

Candidate Starts for JPickles\_247:

(Start: 10 @141311 has 35 MA's), (17, 141350), (18, 141368), (22, 141401), (26, 141428), (29, 141461), (35, 141548), (37, 141590), (43, 141689),

Gene: Janiyra\_253 Start: 142848, Stop: 143297, Start Num: 10

Candidate Starts for Janiyra\_253:

(Start: 10 @142848 has 35 MA's), (17, 142887), (18, 142905), (22, 142938), (26, 142965), (29, 142998), (35, 143085), (37, 143127), (43, 143226),

Gene: Lee7\_249 Start: 144611, Stop: 145060, Start Num: 10

Candidate Starts for Lee7\_249:

(Start: 10 @144611 has 35 MA's), (17, 144650), (18, 144668), (22, 144701), (26, 144728), (29, 144761), (35, 144848), (37, 144890), (43, 144989),

Gene: Maby2021\_250 Start: 143650, Stop: 144099, Start Num: 10

Candidate Starts for Maby2021\_250:

(Start: 10 @143650 has 35 MA's), (17, 143689), (18, 143707), (22, 143740), (26, 143767), (29, 143800), (35, 143887), (37, 143929), (43, 144028),

Gene: Marleymoo\_134 Start: 76219, Stop: 76599, Start Num: 27

Candidate Starts for Marleymoo\_134:

(4, 76000), (12, 76102), (15, 76123), (16, 76126), (24, 76189), (27, 76219), (28, 76228), (31, 76261), (33, 76306), (39, 76393), (42, 76453), (44, 76489), (46, 76585),

Gene: McGee\_251 Start: 142298, Stop: 142747, Start Num: 10

Candidate Starts for McGee\_251:

(Start: 10 @142298 has 35 MA's), (17, 142337), (18, 142355), (22, 142388), (26, 142415), (29, 142448), (35, 142535), (37, 142577), (43, 142676),

Gene: Morizzled23\_247 Start: 141326, Stop: 141775, Start Num: 10

Candidate Starts for Morizzled23\_247:

(Start: 10 @141326 has 35 MA's), (17, 141365), (18, 141383), (22, 141416), (26, 141443), (29, 141476), (35, 141563), (37, 141605), (43, 141704),

Gene: Odette\_154 Start: 81698, Stop: 82069, Start Num: 28

Candidate Starts for Odette\_154:

(4, 81470), (12, 81572), (15, 81593), (16, 81596), (24, 81659), (27, 81689), (28, 81698), (31, 81731), (33, 81776), (39, 81863), (42, 81923), (44, 81959), (46, 82055),

Gene: OrediggerDelux\_245 Start: 143615, Stop: 144064, Start Num: 10

Candidate Starts for OrediggerDelux\_245:

(Start: 10 @143615 has 35 MA's), (17, 143654), (18, 143672), (22, 143705), (26, 143732), (29, 143765), (35, 143852), (37, 143894), (43, 143993),

Gene: PharkleMinkus\_252 Start: 141563, Stop: 142012, Start Num: 10

Candidate Starts for PharkleMinkus\_252:

(Start: 10 @141563 has 35 MA's), (17, 141602), (18, 141620), (22, 141653), (26, 141680), (29, 141713), (35, 141800), (37, 141842), (43, 141941),

Gene: Primadonna\_244 Start: 142325, Stop: 142774, Start Num: 10

Candidate Starts for Primadonna\_244:

(Start: 10 @142325 has 35 MA's), (17, 142364), (18, 142382), (22, 142415), (26, 142442), (29, 142475), (35, 142562), (37, 142604), (43, 142703),

Gene: PurduePete\_250 Start: 143690, Stop: 144139, Start Num: 10

Candidate Starts for PurduePete\_250:

(Start: 10 @143690 has 35 MA's), (17, 143729), (18, 143747), (22, 143780), (26, 143807), (29, 143840), (35, 143927), (37, 143969), (43, 144068),

Gene: Rearden\_102 Start: 60176, Stop: 60565, Start Num: 21

Candidate Starts for Rearden\_102:

(1, 59861), (2, 59885), (3, 59990), (6, 60023), (8, 60041), (11, 60098), (Start: 19 @60161 has 1 MA's), (21, 60176), (24, 60194), (29, 60251), (30, 60257), (34, 60317), (40, 60410), (45, 60551),

Gene: Salacia\_251 Start: 144116, Stop: 144565, Start Num: 10

Candidate Starts for Salacia\_251:

(Start: 10 @144116 has 35 MA's), (17, 144155), (18, 144173), (22, 144206), (26, 144233), (29, 144266), (35, 144353), (37, 144395), (43, 144494),

Gene: Shrimp\_252 Start: 143727, Stop: 144176, Start Num: 10

Candidate Starts for Shrimp\_252:

(Start: 10 @143727 has 35 MA's), (17, 143766), (18, 143784), (22, 143817), (26, 143844), (29, 143877), (35, 143964), (37, 144006), (43, 144105),

Gene: Specks\_254 Start: 143067, Stop: 143516, Start Num: 10

Candidate Starts for Specks\_254:

(Start: 10 @143067 has 35 MA's), (17, 143106), (18, 143124), (22, 143157), (26, 143184), (29, 143217), (35, 143304), (37, 143346), (43, 143445),

Gene: SrishMeg2525\_247 Start: 143222, Stop: 143671, Start Num: 10

Candidate Starts for SrishMeg2525\_247:

(Start: 10 @143222 has 35 MA's), (17, 143261), (18, 143279), (22, 143312), (26, 143339), (29, 143372), (35, 143459), (37, 143501), (43, 143600),

Gene: StubbySaigey\_256 Start: 142752, Stop: 143201, Start Num: 10

Candidate Starts for StubbySaigey\_256:

(Start: 10 @142752 has 35 MA's), (17, 142791), (18, 142809), (22, 142842), (26, 142869), (29, 142902), (35, 142989), (37, 143031), (43, 143130),

Gene: Teardrop\_248 Start: 142079, Stop: 142528, Start Num: 10

Candidate Starts for Teardrop\_248:

(Start: 10 @142079 has 35 MA's), (17, 142118), (18, 142136), (22, 142169), (26, 142196), (29, 142229), (35, 142316), (37, 142358), (43, 142457),

Gene: Thales\_1 Start: 76, Stop: 522, Start Num: 9

Candidate Starts for Thales\_1:

(5, 1), (7, 16), (9, 76), (13, 94), (14, 100), (23, 175), (25, 181), (29, 226), (32, 271), (35, 313), (36, 352), (38, 364), (41, 430),

Gene: TinyTim\_248 Start: 142046, Stop: 142495, Start Num: 10

Candidate Starts for TinyTim\_248:

(Start: 10 @142046 has 35 MA's), (17, 142085), (18, 142103), (22, 142136), (26, 142163), (29, 142196), (35, 142283), (37, 142325), (43, 142424),

Gene: Trinitium\_246 Start: 140800, Stop: 141249, Start Num: 10

Candidate Starts for Trinitium\_246:

(Start: 10 @140800 has 35 MA's), (17, 140839), (18, 140857), (22, 140890), (26, 140917), (29, 140950), (35, 141037), (37, 141079), (43, 141178),

Gene: Yucca\_250 Start: 143605, Stop: 144054, Start Num: 10

Candidate Starts for Yucca\_250:

(Start: 10 @143605 has 35 MA's), (17, 143644), (18, 143662), (22, 143695), (26, 143722), (29, 143755), (35, 143842), (37, 143884), (43, 143983),

Gene: ZygoTaiga\_246 Start: 143902, Stop: 144351, Start Num: 10

Candidate Starts for ZygoTaiga\_246:

(Start: 10 @143902 has 35 MA's), (17, 143941), (18, 143959), (22, 143992), (26, 144019), (29, 144052), (35, 144139), (37, 144181), (43, 144280),