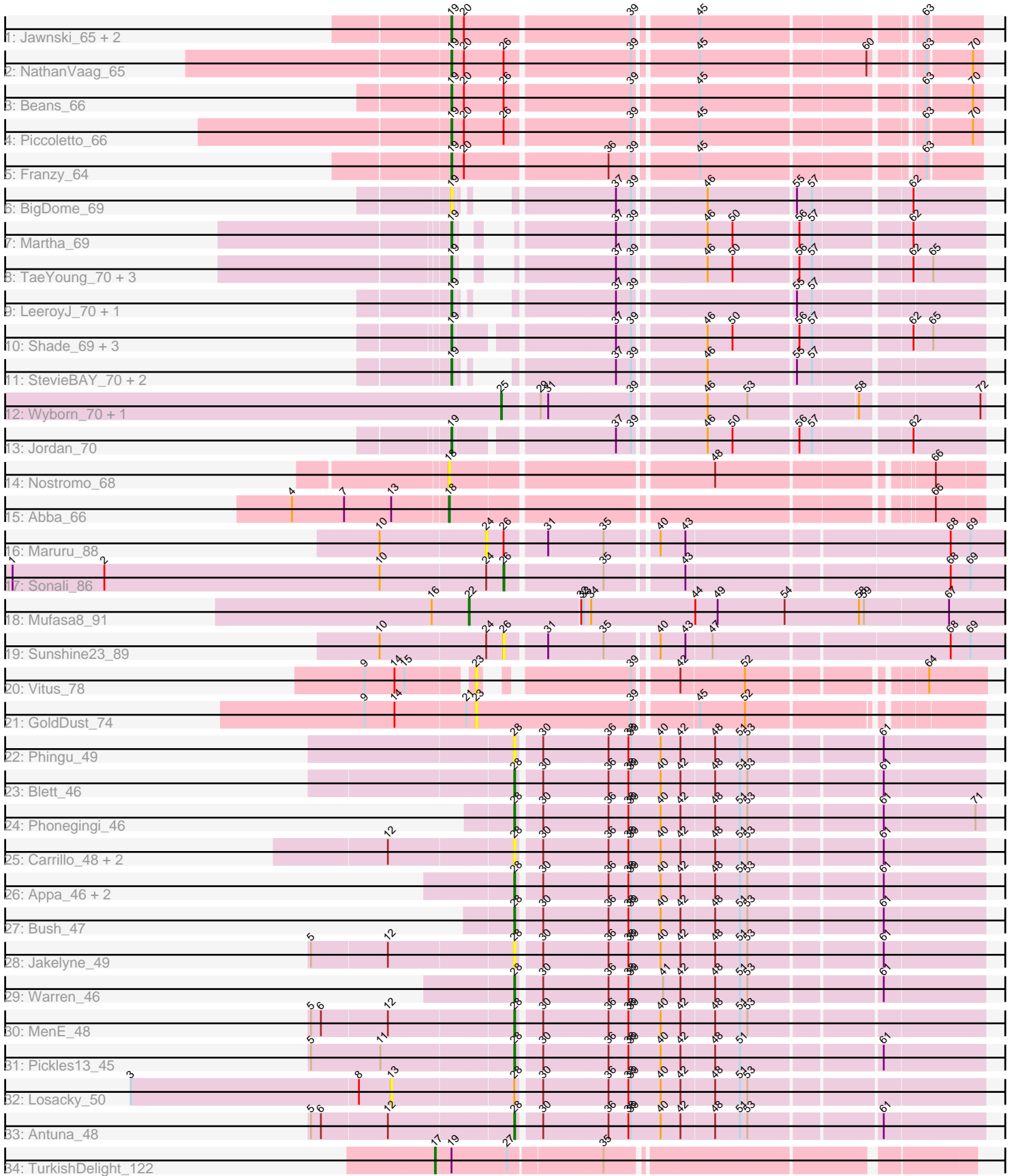


Pham 203016



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 203016 Report

This analysis was run 01/18/25 on database version 583.

Pham number 203016 has 50 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Jawnski\_65, King2\_64, Brent\_66
- Track 2 : NathanVaag\_65
- Track 3 : Beans\_66
- Track 4 : Piccoletto\_66
- Track 5 : Franzy\_64
- Track 6 : BigDome\_69
- Track 7 : Martha\_69
- Track 8 : TaeYoung\_70, JKerns\_69, Grekaycon\_70, BossLady\_71
- Track 9 : LeeroyJ\_70, Timinator\_70
- Track 10 : Shade\_69, Sonny\_69, Zartrosa\_71, Pippa\_70
- Track 11 : StevieBAY\_70, GravityBall\_69, BarretLemon\_69
- Track 12 : Wyborn\_70, Sicarius2\_71
- Track 13 : Jordan\_70
- Track 14 : Nostromo\_68
- Track 15 : Abba\_66
- Track 16 : Maruru\_88
- Track 17 : Sonali\_86
- Track 18 : Mufasa8\_91
- Track 19 : Sunshine23\_89
- Track 20 : Vitus\_78
- Track 21 : GoldDust\_74
- Track 22 : Phingu\_49
- Track 23 : Blett\_46
- Track 24 : Phonegingi\_46
- Track 25 : Carrillo\_48, Guzman\_46, CookieDog\_46
- Track 26 : Appa\_46, PhillyJawn\_47, Dropshot\_46
- Track 27 : Bush\_47
- Track 28 : Jakelyne\_49
- Track 29 : Warren\_46
- Track 30 : MenE\_48
- Track 31 : Pickles13\_45
- Track 32 : Losacky\_50
- Track 33 : Antuna\_48
- Track 34 : TurkishDelight\_122

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

The start number called the most often in the published annotations is 19, it was called in 22 of the 37 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BarretLemon\_69, Beans\_66, BigDome\_69, BossLady\_71, Brent\_66, Franzy\_64, GravityBall\_69, Grekaycon\_70, JKerns\_69, Jawnski\_65, Jordan\_70, King2\_64, LeeroyJ\_70, Martha\_69, NathanVaag\_65, Piccoletto\_66, Pippa\_70, Shade\_69, Sonny\_69, StevieBAY\_70, TaeYoung\_70, Timinator\_70, Zartrosa\_71,

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

- TurkishDelight\_122,

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

- Abba\_66, Antuna\_48, Appa\_46, Blett\_46, Bush\_47, Carrillo\_48, CookieDog\_46, Dropshot\_46, GoldDust\_74, Guzman\_46, Jakelyne\_49, Losacky\_50, Maruru\_88, MenE\_48, Mufasa8\_91, Nostromo\_68, PhillyJawn\_47, Phingu\_49, Phonegingi\_46, Pickles13\_45, Sicarius2\_71, Sonali\_86, Sunshine23\_89, Vitus\_78, Warren\_46, Wyborn\_70,

### **Summary by start number:**

Start 13:

- Found in 2 of 50 ( 4.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Losacky\_50 (GA),

Start 17:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TurkishDelight\_122 (singleton),

Start 18:

- Found in 2 of 50 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abba\_66 (AO3), Nostromo\_68 (AO3),

Start 19:

- Found in 24 of 50 ( 48.0% ) of genes in pham
- Manual Annotations of this start: 22 of 37
- Called 95.8% of time when present
- Phage (with cluster) where this start called: BarretLemon\_69 (AO2), Beans\_66 (AO1), BigDome\_69 (AO2), BossLady\_71 (AO2), Brent\_66 (AO1), Franzy\_64 (AO1), GravityBall\_69 (AO2), Grekaycon\_70 (AO2), JKerns\_69 (AO2), Jawnski\_65 (AO1), Jordan\_70 (AO2), King2\_64 (AO1), LeeroyJ\_70 (AO2), Martha\_69 (AO2), NathanVaag\_65 (AO1), Piccoletto\_66 (AO1), Pippa\_70 (AO2), Shade\_69 (AO2), Sonny\_69 (AO2), StevieBAY\_70 (AO2), TaeYoung\_70 (AO2), Timinator\_70 (AO2), Zartrosa\_71 (AO2),

Start 22:

- Found in 1 of 50 ( 2.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mufasa8\_91 (FG),

Start 23:

- Found in 2 of 50 ( 4.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GoldDust\_74 (FL), Vitus\_78 (FL),

Start 24:

- Found in 3 of 50 ( 6.0% ) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Maruru\_88 (FG),

Start 25:

- Found in 2 of 50 ( 4.0% ) of genes in pham
- Manual Annotations of this start: 2 of 37
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sicarius2\_71 (AO2), Wyborn\_70 (AO2),

Start 26:

- Found in 6 of 50 ( 12.0% ) of genes in pham
- Manual Annotations of this start: 1 of 37
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sonali\_86 (FG), Sunshine23\_89 (FG),

Start 28:

- Found in 16 of 50 ( 32.0% ) of genes in pham
- Manual Annotations of this start: 9 of 37
- Called 93.8% of time when present
- Phage (with cluster) where this start called: Antuna\_48 (GA), Appa\_46 (GA), Blett\_46 (GA), Bush\_47 (GA), Carrillo\_48 (GA), CookieDog\_46 (GA), Dropshot\_46 (GA), Guzman\_46 (GA), Jakelyne\_49 (GA), MenE\_48 (GA), PhillyJawn\_47 (GA), Phing\_49 (GA), Phonegingi\_46 (GA), Pickles13\_45 (GA), Warren\_46 (GA),

**Summary by clusters:**

There are 7 clusters represented in this pham: singleton, GA, AO3, AO2, AO1, FG, FL,

Info for manual annotations of cluster AO1:

- Start number 19 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 19 was manually annotated 15 times for cluster AO2.
- Start number 25 was manually annotated 2 times for cluster AO2.

Info for manual annotations of cluster AO3:

- Start number 18 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster FG:

- Start number 22 was manually annotated 1 time for cluster FG.
- Start number 26 was manually annotated 1 time for cluster FG.

Info for manual annotations of cluster GA:

- Start number 28 was manually annotated 9 times for cluster GA.

### ***Gene Information:***

Gene: Abba\_66 Start: 41901, Stop: 42479, Start Num: 18

Candidate Starts for Abba\_66:

(4, 41721), (7, 41784), (13, 41841), (Start: 18 @41901 has 1 MA's), (66, 42423),

Gene: Antuna\_48 Start: 29370, Stop: 29903, Start Num: 28

Candidate Starts for Antuna\_48:

(5, 29136), (6, 29148), (12, 29226), (Start: 28 @29370 has 9 MA's), (30, 29394), (36, 29472), (38, 29496), (39, 29499), (40, 29535), (42, 29559), (48, 29598), (51, 29628), (53, 29637), (61, 29784),

Gene: Appa\_46 Start: 29135, Stop: 29668, Start Num: 28

Candidate Starts for Appa\_46:

(Start: 28 @29135 has 9 MA's), (30, 29159), (36, 29237), (38, 29261), (39, 29264), (40, 29300), (42, 29324), (48, 29363), (51, 29393), (53, 29402), (61, 29549),

Gene: BarretLemon\_69 Start: 44545, Stop: 45120, Start Num: 19

Candidate Starts for BarretLemon\_69:

(Start: 19 @44545 has 22 MA's), (37, 44716), (39, 44734), (46, 44809), (55, 44911), (57, 44929),

Gene: Beans\_66 Start: 44464, Stop: 45042, Start Num: 19

Candidate Starts for Beans\_66:

(Start: 19 @44464 has 22 MA's), (20, 44479), (Start: 26 @44527 has 1 MA's), (39, 44668), (45, 44737), (63, 44980), (70, 45031),

Gene: BigDome\_69 Start: 44829, Stop: 45359, Start Num: 19

Candidate Starts for BigDome\_69:

(Start: 19 @44829 has 22 MA's), (37, 44955), (39, 44973), (46, 45048), (55, 45150), (57, 45168), (62, 45276),

Gene: Blett\_46 Start: 29321, Stop: 29854, Start Num: 28

Candidate Starts for Blett\_46:

(Start: 28 @29321 has 9 MA's), (30, 29345), (36, 29423), (38, 29447), (39, 29450), (40, 29486), (42, 29510), (48, 29549), (51, 29579), (53, 29588), (61, 29735),

Gene: BossLady\_71 Start: 45159, Stop: 45689, Start Num: 19

Candidate Starts for BossLady\_71:

(Start: 19 @45159 has 22 MA's), (37, 45285), (39, 45303), (46, 45378), (50, 45408), (56, 45483), (57, 45498), (62, 45606), (65, 45627),

Gene: Brent\_66 Start: 44549, Stop: 45127, Start Num: 19

Candidate Starts for Brent\_66:

(Start: 19 @44549 has 22 MA's), (20, 44564), (39, 44753), (45, 44822), (63, 45065),

Gene: Bush\_47 Start: 29269, Stop: 29802, Start Num: 28

Candidate Starts for Bush\_47:

(Start: 28 @29269 has 9 MA's), (30, 29293), (36, 29371), (38, 29395), (39, 29398), (40, 29434), (42, 29458), (48, 29497), (51, 29527), (53, 29536), (61, 29683),

Gene: Carrillo\_48 Start: 29243, Stop: 29776, Start Num: 28

Candidate Starts for Carrillo\_48:

(12, 29099), (Start: 28 @29243 has 9 MA's), (30, 29267), (36, 29345), (38, 29369), (39, 29372), (40, 29408), (42, 29432), (48, 29471), (51, 29501), (53, 29510), (61, 29657),

Gene: CookieDog\_46 Start: 29243, Stop: 29776, Start Num: 28

Candidate Starts for CookieDog\_46:

(12, 29099), (Start: 28 @29243 has 9 MA's), (30, 29267), (36, 29345), (38, 29369), (39, 29372), (40, 29408), (42, 29432), (48, 29471), (51, 29501), (53, 29510), (61, 29657),

Gene: Dropshot\_46 Start: 28970, Stop: 29503, Start Num: 28

Candidate Starts for Dropshot\_46:

(Start: 28 @28970 has 9 MA's), (30, 28994), (36, 29072), (38, 29096), (39, 29099), (40, 29135), (42, 29159), (48, 29198), (51, 29228), (53, 29237), (61, 29384),

Gene: Franzy\_64 Start: 44565, Stop: 45143, Start Num: 19

Candidate Starts for Franzy\_64:

(Start: 19 @44565 has 22 MA's), (20, 44580), (36, 44742), (39, 44769), (45, 44838), (63, 45081),

Gene: GoldDust\_74 Start: 47538, Stop: 48089, Start Num: 23

Candidate Starts for GoldDust\_74:

(9, 47406), (14, 47442), (21, 47526), (23, 47538), (39, 47721), (45, 47787), (52, 47841),

Gene: GravityBall\_69 Start: 44845, Stop: 45375, Start Num: 19

Candidate Starts for GravityBall\_69:

(Start: 19 @44845 has 22 MA's), (37, 44971), (39, 44989), (46, 45064), (55, 45166), (57, 45184),

Gene: Grekaycon\_70 Start: 45072, Stop: 45602, Start Num: 19

Candidate Starts for Grekaycon\_70:

(Start: 19 @45072 has 22 MA's), (37, 45198), (39, 45216), (46, 45291), (50, 45321), (56, 45396), (57, 45411), (62, 45519), (65, 45540),

Gene: Guzman\_46 Start: 29226, Stop: 29759, Start Num: 28

Candidate Starts for Guzman\_46:

(12, 29082), (Start: 28 @29226 has 9 MA's), (30, 29250), (36, 29328), (38, 29352), (39, 29355), (40, 29391), (42, 29415), (48, 29454), (51, 29484), (53, 29493), (61, 29640),

Gene: JKerns\_69 Start: 45051, Stop: 45626, Start Num: 19

Candidate Starts for JKerns\_69:

(Start: 19 @45051 has 22 MA's), (37, 45222), (39, 45240), (46, 45315), (50, 45345), (56, 45420), (57, 45435), (62, 45543), (65, 45564),

Gene: Jakelyne\_49 Start: 29336, Stop: 29869, Start Num: 28

Candidate Starts for Jakelyne\_49:

(5, 29102), (12, 29192), (Start: 28 @29336 has 9 MA's), (30, 29360), (36, 29438), (38, 29462), (39, 29465), (40, 29501), (42, 29525), (48, 29564), (51, 29594), (53, 29603), (61, 29750),

Gene: Jawnski\_65 Start: 44074, Stop: 44652, Start Num: 19

Candidate Starts for Jawnski\_65:

(Start: 19 @44074 has 22 MA's), (20, 44089), (39, 44278), (45, 44347), (63, 44590),

Gene: Jordan\_70 Start: 45176, Stop: 45751, Start Num: 19

Candidate Starts for Jordan\_70:

(Start: 19 @45176 has 22 MA's), (37, 45347), (39, 45365), (46, 45440), (50, 45470), (56, 45545), (57, 45560), (62, 45668),

Gene: King2\_64 Start: 44610, Stop: 45188, Start Num: 19

Candidate Starts for King2\_64:

(Start: 19 @44610 has 22 MA's), (20, 44625), (39, 44814), (45, 44883), (63, 45126),

Gene: LeeroyJ\_70 Start: 44774, Stop: 45304, Start Num: 19

Candidate Starts for LeeroyJ\_70:

(Start: 19 @44774 has 22 MA's), (37, 44900), (39, 44918), (55, 45095), (57, 45113),

Gene: Losacky\_50 Start: 29360, Stop: 30034, Start Num: 13

Candidate Starts for Losacky\_50:

(3, 29048), (8, 29321), (13, 29360), (Start: 28 @29501 has 9 MA's), (30, 29525), (36, 29603), (38, 29627), (39, 29630), (40, 29666), (42, 29690), (48, 29729), (51, 29759), (53, 29768),

Gene: Martha\_69 Start: 45008, Stop: 45538, Start Num: 19

Candidate Starts for Martha\_69:

(Start: 19 @45008 has 22 MA's), (37, 45134), (39, 45152), (46, 45227), (50, 45257), (56, 45332), (57, 45347), (62, 45455),

Gene: Maruru\_88 Start: 52810, Stop: 53424, Start Num: 24

Candidate Starts for Maruru\_88:

(10, 52684), (24, 52810), (Start: 26 @52831 has 1 MA's), (31, 52873), (35, 52939), (40, 52993), (43, 53023), (68, 53326), (69, 53350),

Gene: MenE\_48 Start: 29392, Stop: 29925, Start Num: 28

Candidate Starts for MenE\_48:

(5, 29158), (6, 29170), (12, 29248), (Start: 28 @29392 has 9 MA's), (30, 29416), (36, 29494), (38, 29518), (39, 29521), (40, 29557), (42, 29581), (48, 29620), (51, 29650), (53, 29659),

Gene: Mufasa8\_91 Start: 53065, Stop: 53769, Start Num: 22

Candidate Starts for Mufasa8\_91:

(16, 53020), (Start: 22 @53065 has 1 MA's), (32, 53197), (33, 53200), (34, 53209), (44, 53332), (49, 53359), (54, 53440), (58, 53530), (59, 53536), (67, 53635),

Gene: NathanVaag\_65 Start: 44298, Stop: 44876, Start Num: 19

Candidate Starts for NathanVaag\_65:

(Start: 19 @44298 has 22 MA's), (20, 44313), (Start: 26 @44361 has 1 MA's), (39, 44502), (45, 44571), (60, 44763), (63, 44814), (70, 44865),

Gene: Nostromo\_68 Start: 42650, Stop: 43228, Start Num: 18

Candidate Starts for Nostromo\_68:

(Start: 18 @42650 has 1 MA's), (48, 42941), (66, 43172),

Gene: PhillyJawn\_47 Start: 29132, Stop: 29665, Start Num: 28

Candidate Starts for PhillyJawn\_47:

(Start: 28 @29132 has 9 MA's), (30, 29156), (36, 29234), (38, 29258), (39, 29261), (40, 29297), (42, 29321), (48, 29360), (51, 29390), (53, 29399), (61, 29546),

Gene: Phingu\_49 Start: 29357, Stop: 29890, Start Num: 28

Candidate Starts for Phingu\_49:

(Start: 28 @29357 has 9 MA's), (30, 29381), (36, 29459), (38, 29483), (39, 29486), (40, 29522), (42, 29546), (48, 29585), (51, 29615), (53, 29624), (61, 29771),

Gene: Phonegingi\_46 Start: 29171, Stop: 29704, Start Num: 28

Candidate Starts for Phonegingi\_46:

(Start: 28 @29171 has 9 MA's), (30, 29195), (36, 29273), (38, 29297), (39, 29300), (40, 29336), (42, 29360), (48, 29399), (51, 29429), (53, 29438), (61, 29585), (71, 29693),

Gene: Piccoletto\_66 Start: 44460, Stop: 45038, Start Num: 19

Candidate Starts for Piccoletto\_66:

(Start: 19 @44460 has 22 MA's), (20, 44475), (Start: 26 @44523 has 1 MA's), (39, 44664), (45, 44733), (63, 44976), (70, 45027),

Gene: Pickles13\_45 Start: 29439, Stop: 29972, Start Num: 28

Candidate Starts for Pickles13\_45:

(5, 29202), (11, 29286), (Start: 28 @29439 has 9 MA's), (30, 29463), (36, 29541), (38, 29565), (39, 29568), (40, 29604), (42, 29628), (48, 29667), (51, 29697), (61, 29853),

Gene: Pippa\_70 Start: 45043, Stop: 45573, Start Num: 19

Candidate Starts for Pippa\_70:

(Start: 19 @45043 has 22 MA's), (37, 45169), (39, 45187), (46, 45262), (50, 45292), (56, 45367), (57, 45382), (62, 45490), (65, 45511),

Gene: Shade\_69 Start: 44814, Stop: 45389, Start Num: 19

Candidate Starts for Shade\_69:

(Start: 19 @44814 has 22 MA's), (37, 44985), (39, 45003), (46, 45078), (50, 45108), (56, 45183), (57, 45198), (62, 45306), (65, 45327),

Gene: Sicarius2\_71 Start: 43199, Stop: 43729, Start Num: 25

Candidate Starts for Sicarius2\_71:

(Start: 25 @43199 has 2 MA's), (29, 43235), (31, 43244), (39, 43343), (46, 43421), (53, 43469), (58, 43592), (72, 43724),

Gene: Sonali\_86 Start: 53450, Stop: 54043, Start Num: 26

Candidate Starts for Sonali\_86:

(1, 52859), (2, 52970), (10, 53303), (24, 53429), (Start: 26 @53450 has 1 MA's), (35, 53558), (43, 53642), (68, 53945), (69, 53969),

Gene: Sonny\_69 Start: 44737, Stop: 45312, Start Num: 19

Candidate Starts for Sonny\_69:

(Start: 19 @44737 has 22 MA's), (37, 44908), (39, 44926), (46, 45001), (50, 45031), (56, 45106), (57, 45121), (62, 45229), (65, 45250),

Gene: StevieBAY\_70 Start: 45067, Stop: 45597, Start Num: 19

Candidate Starts for StevieBAY\_70:



(Start: 19 @45067 has 22 MA's), (37, 45193), (39, 45211), (46, 45286), (55, 45388), (57, 45406),

Gene: Sunshine23\_89 Start: 53186, Stop: 53779, Start Num: 26

Candidate Starts for Sunshine23\_89:

(10, 53039), (24, 53165), (Start: 26 @53186 has 1 MA's), (31, 53228), (35, 53294), (40, 53348), (43, 53378), (47, 53408), (68, 53681), (69, 53705),

Gene: TaeYoung\_70 Start: 44980, Stop: 45510, Start Num: 19

Candidate Starts for TaeYoung\_70:

(Start: 19 @44980 has 22 MA's), (37, 45106), (39, 45124), (46, 45199), (50, 45229), (56, 45304), (57, 45319), (62, 45427), (65, 45448),

Gene: Timinator\_70 Start: 44887, Stop: 45417, Start Num: 19

Candidate Starts for Timinator\_70:

(Start: 19 @44887 has 22 MA's), (37, 45013), (39, 45031), (55, 45208), (57, 45226),

Gene: TurkishDelight\_122 Start: 89500, Stop: 90093, Start Num: 17

Candidate Starts for TurkishDelight\_122:

(Start: 17 @89500 has 1 MA's), (Start: 19 @89518 has 22 MA's), (27, 89584), (35, 89689),

Gene: Vitus\_78 Start: 46317, Stop: 46829, Start Num: 23

Candidate Starts for Vitus\_78:

(9, 46197), (14, 46233), (15, 46245), (23, 46317), (39, 46458), (42, 46503), (52, 46578), (64, 46764),

Gene: Warren\_46 Start: 29178, Stop: 29711, Start Num: 28

Candidate Starts for Warren\_46:

(Start: 28 @29178 has 9 MA's), (30, 29202), (36, 29280), (38, 29304), (39, 29307), (41, 29346), (42, 29367), (48, 29406), (51, 29436), (53, 29445), (61, 29592),

Gene: Wyborn\_70 Start: 43934, Stop: 44464, Start Num: 25

Candidate Starts for Wyborn\_70:

(Start: 25 @43934 has 2 MA's), (29, 43970), (31, 43979), (39, 44078), (46, 44156), (53, 44204), (58, 44327), (72, 44459),

Gene: Zartrosa\_71 Start: 45067, Stop: 45642, Start Num: 19

Candidate Starts for Zartrosa\_71:

(Start: 19 @45067 has 22 MA's), (37, 45238), (39, 45256), (46, 45331), (50, 45361), (56, 45436), (57, 45451), (62, 45559), (65, 45580),