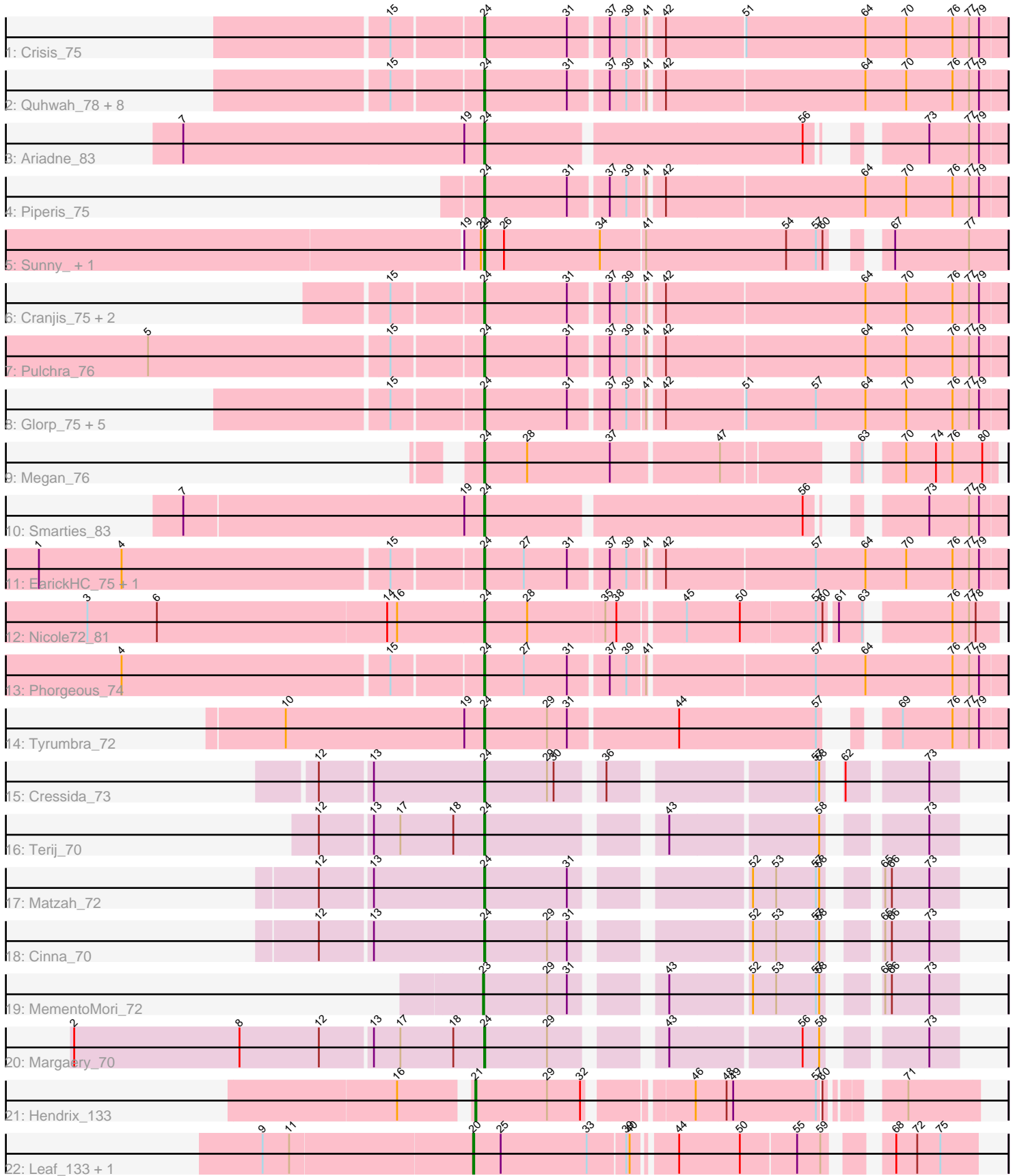


# Pham 214436



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 214436 Report

This analysis was run 02/22/25 on database version 588.

Pham number 214436 has 40 members, 1 are drafts.

Phages represented in each track:

- Track 1 : Crisis\_75
- Track 2 : Quhwah\_78, Scumberland\_76, Onika\_73, Ramiel05\_73, Antares\_74, PiperSansNom\_75, Kowalski\_73, Savannah\_73, BrazzalePHS\_73
- Track 3 : Ariadne\_83
- Track 4 : Piperis\_75
- Track 5 : Sunny\_, Merry\_
- Track 6 : Cranjis\_75, Phrancesco\_74, Busephilis\_73
- Track 7 : Pulchra\_76
- Track 8 : Glorp\_75, Jollipop\_75, Hermeonysus\_74, Paschalis\_74, Selwyn23\_75, Jefe\_74
- Track 9 : Megan\_76
- Track 10 : Smarties\_83
- Track 11 : EarickHC\_75, KaiHaiDragon\_75
- Track 12 : Nicole72\_81
- Track 13 : Phorgeous\_74
- Track 14 : Tyumbra\_72
- Track 15 : Cressida\_73
- Track 16 : Terij\_70
- Track 17 : Matzah\_72
- Track 18 : Cinna\_70
- Track 19 : MementoMori\_72
- Track 20 : Margaery\_70
- Track 21 : Hendrix\_133
- Track 22 : Leaf\_133, Dewdrop\_133

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

The start number called the most often in the published annotations is 24, it was called in 35 of the 39 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antares\_74, Ariadne\_83, BrazzalePHS\_73, Busephilis\_73, Cinna\_70, Cranjis\_75, Cressida\_73, Crisis\_75, EarickHC\_75, Glorp\_75, Hermeonysus\_74, Jefe\_74, Jollipop\_75, KaiHaiDragon\_75, Kowalski\_73, Margaery\_70, Matzah\_72, Megan\_76,

Merry\_, Nicole72\_81, Onika\_73, Paschalis\_74, Phorgeous\_74, Phrancesco\_74, PiperSansNom\_75, Piperis\_75, Pulchra\_76, Quhwah\_78, Ramiel05\_73, Savannah\_73, Scumberland\_76, Selwyn23\_75, Smarties\_83, Sunny\_, Terij\_70, Tyrumbra\_72,

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

- 

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

- Dewdrop\_133, Hendrix\_133, Leaf\_133, MementoMori\_72,

### Summary by start number:

Start 20:

- Found in 2 of 40 ( 5.0% ) of genes in pham
- Manual Annotations of this start: 2 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dewdrop\_133 (GC), Leaf\_133 (GC),

Start 21:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hendrix\_133 (GC),

Start 23:

- Found in 1 of 40 ( 2.5% ) of genes in pham
- Manual Annotations of this start: 1 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MementoMori\_72 (EI),

Start 24:

- Found in 36 of 40 ( 90.0% ) of genes in pham
- Manual Annotations of this start: 35 of 39
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antares\_74 (EC), Ariadne\_83 (EC), BrazzalePHS\_73 (EC), Busephilis\_73 (EC), Cinna\_70 (EI), Cranjis\_75 (EC), Cressida\_73 (EI), Crisis\_75 (EC), EarickHC\_75 (EC), Glorp\_75 (EC), Hermeonysus\_74 (EC), Jefe\_74 (EC), Jollipop\_75 (EC), KaiHaiDragon\_75 (EC), Kowalski\_73 (EC), Margaery\_70 (EI), Matzah\_72 (EI), Megan\_76 (EC), Merry\_ (EC), Nicole72\_81 (EC), Onika\_73 (EC), Paschalis\_74 (EC), Phorgeous\_74 (EC), Phrancesco\_74 (EC), PiperSansNom\_75 (EC), Piperis\_75 (EC), Pulchra\_76 (EC), Quhwah\_78 (EC), Ramiel05\_73 (EC), Savannah\_73 (EC), Scumberland\_76 (EC), Selwyn23\_75 (EC), Smarties\_83 (EC), Sunny\_ (EC), Terij\_70 (EI), Tyrumbra\_72 (EC),

### Summary by clusters:

There are 3 clusters represented in this pham: GC, EI, EC,

Info for manual annotations of cluster EC:

- Start number 24 was manually annotated 30 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 23 was manually annotated 1 time for cluster EI.
- Start number 24 was manually annotated 5 times for cluster EI.

Info for manual annotations of cluster GC:

- Start number 20 was manually annotated 2 times for cluster GC.
- Start number 21 was manually annotated 1 time for cluster GC.

### **Gene Information:**

Gene: Antares\_74 Start: 44256, Stop: 44708, Start Num: 24

Candidate Starts for Antares\_74:

(15, 44178), (Start: 24 @44256 has 35 MA's), (31, 44331), (37, 44364), (39, 44379), (41, 44394), (42, 44406), (64, 44583), (70, 44619), (76, 44661), (77, 44676), (79, 44685),

Gene: Ariadne\_83 Start: 45603, Stop: 46010, Start Num: 24

Candidate Starts for Ariadne\_83:

(7, 45333), (19, 45585), (Start: 24 @45603 has 35 MA's), (56, 45879), (73, 45942), (77, 45978), (79, 45987),

Gene: BrazzalePHS\_73 Start: 44024, Stop: 44476, Start Num: 24

Candidate Starts for BrazzalePHS\_73:

(15, 43946), (Start: 24 @44024 has 35 MA's), (31, 44099), (37, 44132), (39, 44147), (41, 44162), (42, 44174), (64, 44351), (70, 44387), (76, 44429), (77, 44444), (79, 44453),

Gene: Busephilis\_73 Start: 43963, Stop: 44415, Start Num: 24

Candidate Starts for Busephilis\_73:

(15, 43885), (Start: 24 @43963 has 35 MA's), (31, 44038), (37, 44071), (39, 44086), (41, 44101), (42, 44113), (64, 44290), (70, 44326), (76, 44368), (77, 44383), (79, 44392),

Gene: Cinna\_70 Start: 45002, Stop: 45364, Start Num: 24

Candidate Starts for Cinna\_70:

(12, 44858), (13, 44903), (Start: 24 @45002 has 35 MA's), (29, 45059), (31, 45077), (52, 45209), (53, 45230), (57, 45266), (58, 45269), (65, 45299), (66, 45305), (73, 45338),

Gene: Cranjis\_75 Start: 44211, Stop: 44663, Start Num: 24

Candidate Starts for Cranjis\_75:

(15, 44133), (Start: 24 @44211 has 35 MA's), (31, 44286), (37, 44319), (39, 44334), (41, 44349), (42, 44361), (64, 44538), (70, 44574), (76, 44616), (77, 44631), (79, 44640),

Gene: Cressida\_73 Start: 44617, Stop: 44979, Start Num: 24

Candidate Starts for Cressida\_73:

(12, 44473), (13, 44518), (Start: 24 @44617 has 35 MA's), (29, 44674), (30, 44680), (36, 44713), (57, 44881), (58, 44884), (62, 44890), (73, 44953),

Gene: Crisis\_75 Start: 44026, Stop: 44478, Start Num: 24

Candidate Starts for Crisis\_75:

(15, 43948), (Start: 24 @44026 has 35 MA's), (31, 44101), (37, 44134), (39, 44149), (41, 44164), (42, 44176), (51, 44245), (64, 44353), (70, 44389), (76, 44431), (77, 44446), (79, 44455),

Gene: Dewdrop\_133 Start: 80678, Stop: 81082, Start Num: 20

Candidate Starts for Dewdrop\_133:

(9, 80492), (11, 80516), (Start: 20 @80678 has 2 MA's), (25, 80702), (33, 80780), (39, 80813), (40, 80816), (44, 80849), (50, 80903), (55, 80951), (59, 80972), (68, 81011), (72, 81029), (75, 81050),

Gene: EarickHC\_75 Start: 43948, Stop: 44400, Start Num: 24

Candidate Starts for EarickHC\_75:

(1, 43558), (4, 43633), (15, 43870), (Start: 24 @43948 has 35 MA's), (27, 43984), (31, 44023), (37, 44056), (39, 44071), (41, 44086), (42, 44098), (57, 44230), (64, 44275), (70, 44311), (76, 44353), (77, 44368), (79, 44377),

Gene: Glorp\_75 Start: 44008, Stop: 44460, Start Num: 24

Candidate Starts for Glorp\_75:

(15, 43930), (Start: 24 @44008 has 35 MA's), (31, 44083), (37, 44116), (39, 44131), (41, 44146), (42, 44158), (51, 44227), (57, 44290), (64, 44335), (70, 44371), (76, 44413), (77, 44428), (79, 44437),

Gene: Hendrix\_133 Start: 84258, Stop: 84653, Start Num: 21

Candidate Starts for Hendrix\_133:

(16, 84201), (Start: 21 @84258 has 1 MA's), (29, 84321), (32, 84351), (46, 84432), (48, 84459), (49, 84465), (57, 84540), (60, 84543), (71, 84591),

Gene: Hermeonysus\_74 Start: 43932, Stop: 44384, Start Num: 24

Candidate Starts for Hermeonysus\_74:

(15, 43854), (Start: 24 @43932 has 35 MA's), (31, 44007), (37, 44040), (39, 44055), (41, 44070), (42, 44082), (51, 44151), (57, 44214), (64, 44259), (70, 44295), (76, 44337), (77, 44352), (79, 44361),

Gene: Jefe\_74 Start: 43993, Stop: 44445, Start Num: 24

Candidate Starts for Jefe\_74:

(15, 43915), (Start: 24 @43993 has 35 MA's), (31, 44068), (37, 44101), (39, 44116), (41, 44131), (42, 44143), (51, 44212), (57, 44275), (64, 44320), (70, 44356), (76, 44398), (77, 44413), (79, 44422),

Gene: Jollipop\_75 Start: 44382, Stop: 44834, Start Num: 24

Candidate Starts for Jollipop\_75:

(15, 44304), (Start: 24 @44382 has 35 MA's), (31, 44457), (37, 44490), (39, 44505), (41, 44520), (42, 44532), (51, 44601), (57, 44664), (64, 44709), (70, 44745), (76, 44787), (77, 44802), (79, 44811),

Gene: KaiHaiDragon\_75 Start: 43948, Stop: 44400, Start Num: 24

Candidate Starts for KaiHaiDragon\_75:

(1, 43558), (4, 43633), (15, 43870), (Start: 24 @43948 has 35 MA's), (27, 43984), (31, 44023), (37, 44056), (39, 44071), (41, 44086), (42, 44098), (57, 44230), (64, 44275), (70, 44311), (76, 44353), (77, 44368), (79, 44377),

Gene: Kowalski\_73 Start: 44019, Stop: 44471, Start Num: 24

Candidate Starts for Kowalski\_73:

(15, 43941), (Start: 24 @44019 has 35 MA's), (31, 44094), (37, 44127), (39, 44142), (41, 44157), (42, 44169), (64, 44346), (70, 44382), (76, 44424), (77, 44439), (79, 44448),

Gene: Leaf\_133 Start: 80609, Stop: 81013, Start Num: 20

Candidate Starts for Leaf\_133:

(9, 80423), (11, 80447), (Start: 20 @80609 has 2 MA's), (25, 80633), (33, 80711), (39, 80744), (40, 80747), (44, 80780), (50, 80834), (55, 80882), (59, 80903), (68, 80942), (72, 80960), (75, 80981),

Gene: Margaery\_70 Start: 44501, Stop: 44863, Start Num: 24

Candidate Starts for Margaery\_70:

(2, 44135), (8, 44285), (12, 44357), (13, 44402), (17, 44426), (18, 44474), (Start: 24 @44501 has 35 MA's), (29, 44558), (43, 44639), (56, 44753), (58, 44768), (73, 44837),

Gene: Matzah\_72 Start: 45069, Stop: 45431, Start Num: 24

Candidate Starts for Matzah\_72:

(12, 44925), (13, 44970), (Start: 24 @45069 has 35 MA's), (31, 45144), (52, 45276), (53, 45297), (57, 45333), (58, 45336), (65, 45366), (66, 45372), (73, 45405),

Gene: Megan\_76 Start: 49907, Stop: 50311, Start Num: 24

Candidate Starts for Megan\_76:

(Start: 24 @49907 has 35 MA's), (28, 49946), (37, 50021), (47, 50114), (63, 50210), (70, 50231), (74, 50258), (76, 50273), (80, 50300),

Gene: MementoMori\_72 Start: 44957, Stop: 45319, Start Num: 23

Candidate Starts for MementoMori\_72:

(Start: 23 @44957 has 1 MA's), (29, 45014), (31, 45032), (43, 45095), (52, 45164), (53, 45185), (57, 45221), (58, 45224), (65, 45254), (66, 45260), (73, 45293),

Gene: Merry\_ Start: 44999, Stop: 45430, Start Num: 24

Candidate Starts for Merry\_:

(19, 44981), (22, 44996), (Start: 24 @44999 has 35 MA's), (26, 45017), (34, 45104), (41, 45143), (54, 45269), (57, 45296), (60, 45302), (67, 45329), (77, 45395),

Gene: Nicole72\_81 Start: 52125, Stop: 52550, Start Num: 24

Candidate Starts for Nicole72\_81:

(3, 51768), (6, 51831), (14, 52038), (16, 52047), (Start: 24 @52125 has 35 MA's), (28, 52164), (35, 52233), (38, 52242), (45, 52296), (50, 52344), (57, 52410), (60, 52416), (61, 52425), (63, 52446), (76, 52509), (77, 52524), (78, 52530),

Gene: Onika\_73 Start: 44022, Stop: 44474, Start Num: 24

Candidate Starts for Onika\_73:

(15, 43944), (Start: 24 @44022 has 35 MA's), (31, 44097), (37, 44130), (39, 44145), (41, 44160), (42, 44172), (64, 44349), (70, 44385), (76, 44427), (77, 44442), (79, 44451),

Gene: Paschalis\_74 Start: 44047, Stop: 44499, Start Num: 24

Candidate Starts for Paschalis\_74:

(15, 43969), (Start: 24 @44047 has 35 MA's), (31, 44122), (37, 44155), (39, 44170), (41, 44185), (42, 44197), (51, 44266), (57, 44329), (64, 44374), (70, 44410), (76, 44452), (77, 44467), (79, 44476),

Gene: Phorgeous\_74 Start: 43830, Stop: 44282, Start Num: 24

Candidate Starts for Phorgeous\_74:

(4, 43515), (15, 43752), (Start: 24 @43830 has 35 MA's), (27, 43866), (31, 43905), (37, 43938), (39, 43953), (41, 43968), (57, 44112), (64, 44157), (76, 44235), (77, 44250), (79, 44259),

Gene: Phrancesco\_74 Start: 44153, Stop: 44605, Start Num: 24

Candidate Starts for Phrancesco\_74:

(15, 44075), (Start: 24 @44153 has 35 MA's), (31, 44228), (37, 44261), (39, 44276), (41, 44291), (42, 44303), (64, 44480), (70, 44516), (76, 44558), (77, 44573), (79, 44582),

Gene: PiperSansNom\_75 Start: 44332, Stop: 44784, Start Num: 24

Candidate Starts for PiperSansNom\_75:

(15, 44254), (Start: 24 @44332 has 35 MA's), (31, 44407), (37, 44440), (39, 44455), (41, 44470), (42, 44482), (64, 44659), (70, 44695), (76, 44737), (77, 44752), (79, 44761),

Gene: Piperis\_75 Start: 43955, Stop: 44407, Start Num: 24

Candidate Starts for Piperis\_75:

(Start: 24 @43955 has 35 MA's), (31, 44030), (37, 44063), (39, 44078), (41, 44093), (42, 44105), (64, 44282), (70, 44318), (76, 44360), (77, 44375), (79, 44384),

Gene: Pulchra\_76 Start: 44351, Stop: 44803, Start Num: 24

Candidate Starts for Pulchra\_76:

(5, 44060), (15, 44273), (Start: 24 @44351 has 35 MA's), (31, 44426), (37, 44459), (39, 44474), (41, 44489), (42, 44501), (64, 44678), (70, 44714), (76, 44756), (77, 44771), (79, 44780),

Gene: Quhwah\_78 Start: 44640, Stop: 45092, Start Num: 24

Candidate Starts for Quhwah\_78:

(15, 44562), (Start: 24 @44640 has 35 MA's), (31, 44715), (37, 44748), (39, 44763), (41, 44778), (42, 44790), (64, 44967), (70, 45003), (76, 45045), (77, 45060), (79, 45069),

Gene: Ramiel05\_73 Start: 44019, Stop: 44471, Start Num: 24

Candidate Starts for Ramiel05\_73:

(15, 43941), (Start: 24 @44019 has 35 MA's), (31, 44094), (37, 44127), (39, 44142), (41, 44157), (42, 44169), (64, 44346), (70, 44382), (76, 44424), (77, 44439), (79, 44448),

Gene: Savannah\_73 Start: 44070, Stop: 44522, Start Num: 24

Candidate Starts for Savannah\_73:

(15, 43992), (Start: 24 @44070 has 35 MA's), (31, 44145), (37, 44178), (39, 44193), (41, 44208), (42, 44220), (64, 44397), (70, 44433), (76, 44475), (77, 44490), (79, 44499),

Gene: Scumberland\_76 Start: 44265, Stop: 44717, Start Num: 24

Candidate Starts for Scumberland\_76:

(15, 44187), (Start: 24 @44265 has 35 MA's), (31, 44340), (37, 44373), (39, 44388), (41, 44403), (42, 44415), (64, 44592), (70, 44628), (76, 44670), (77, 44685), (79, 44694),

Gene: Selwyn23\_75 Start: 44182, Stop: 44634, Start Num: 24

Candidate Starts for Selwyn23\_75:

(15, 44104), (Start: 24 @44182 has 35 MA's), (31, 44257), (37, 44290), (39, 44305), (41, 44320), (42, 44332), (51, 44401), (57, 44464), (64, 44509), (70, 44545), (76, 44587), (77, 44602), (79, 44611),

Gene: Smarties\_83 Start: 45600, Stop: 46007, Start Num: 24

Candidate Starts for Smarties\_83:

(7, 45333), (19, 45582), (Start: 24 @45600 has 35 MA's), (56, 45876), (73, 45939), (77, 45975), (79, 45984),

Gene: Sunny\_ Start: 45001, Stop: 45432, Start Num: 24

Candidate Starts for Sunny\_:

(19, 44983), (22, 44998), (Start: 24 @45001 has 35 MA's), (26, 45019), (34, 45106), (41, 45145), (54, 45271), (57, 45298), (60, 45304), (67, 45331), (77, 45397),

Gene: Terij\_70 Start: 43556, Stop: 43918, Start Num: 24

Candidate Starts for Terij\_70:

(12, 43412), (13, 43457), (17, 43481), (18, 43529), (Start: 24 @43556 has 35 MA's), (43, 43694), (58, 43823), (73, 43892),

Gene: Tyumbra\_72 Start: 44541, Stop: 44960, Start Num: 24

Candidate Starts for Tyumbra\_72:

(10, 44364), (19, 44523), (Start: 24 @44541 has 35 MA's), (29, 44598), (31, 44616), (44, 44712), (57, 44835), (69, 44868), (76, 44913), (77, 44928), (79, 44937),