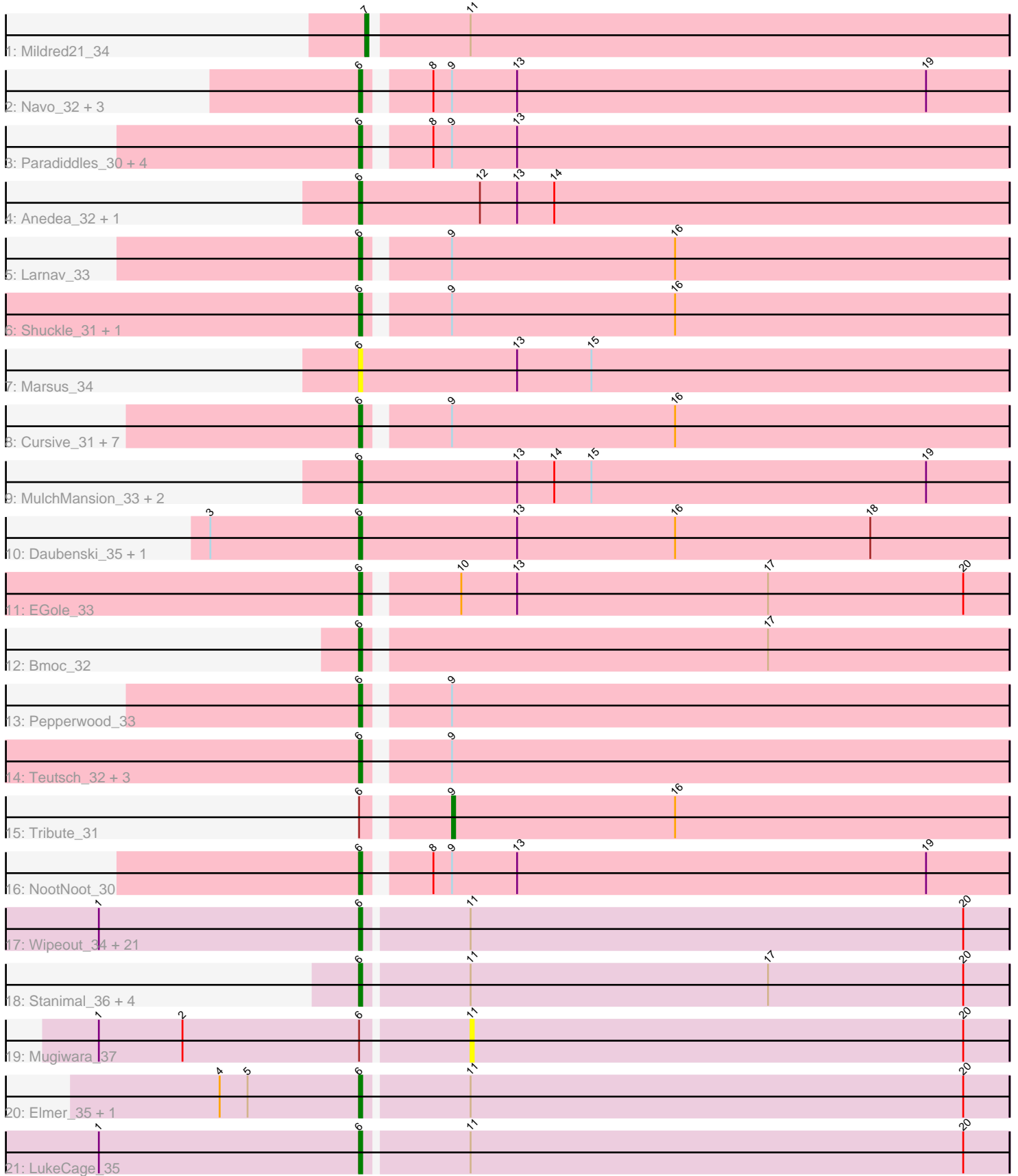


Pham 221414



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 221414 Report

This analysis was run 03/28/25 on database version 593.

Pham number 221414 has 69 members, 8 are drafts.

Phages represented in each track:

- Track 1 : Mildred21\_34
- Track 2 : Navo\_32, Liandry\_33, Squillium\_33, PinkiePie\_33
- Track 3 : Paradiddles\_30, Braelyn\_33, WhereRU\_30, Persimmon\_30, Bartholomune\_33
- Track 4 : Anedea\_32, Riptide\_33
- Track 5 : Larnav\_33
- Track 6 : Shuckle\_31, Peebs\_32
- Track 7 : Marsus\_34
- Track 8 : Cursive\_31, Watermoore\_33, Leo04\_33, Lululemon\_32, Cross\_33, BlueOtter\_33, PacManQ\_32, HangryHippo\_33
- Track 9 : MulchMansion\_33, LilMartin\_33, Angela\_33
- Track 10 : Daubenski\_35, Cadmus\_36
- Track 11 : EGole\_33
- Track 12 : Bmoc\_32
- Track 13 : Pepperwood\_33
- Track 14 : Teutsch\_32, Scheme\_33, Sushi23\_33, Samisti12\_32
- Track 15 : Tribute\_31
- Track 16 : NootNoot\_30
- Track 17 : Wipeout\_34, Bordeaux\_34, PumpkinSpice\_35, MindFlayer\_34, IchabodCrane\_34, Enygma\_33, Gibbi\_38, Birchlyn\_33, Battuta\_34, Spelly\_36, CeilingFan\_35, Rikishi\_38, KentuckyRacer\_36, TomSawyer\_34, Spilled\_36, Quaran19\_36, Karimac\_35, Jollison\_35, Amabiko\_36, JimJam\_36, Starbow\_34, SaltySpitoon\_36
- Track 18 : Stanimal\_36, Sollertia\_36, BoomerJR\_36, Yaboi\_37, Genie2\_36
- Track 19 : Mugiwara\_37
- Track 20 : Elmer\_35, Wofford\_33
- Track 21 : LukeCage\_35

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

The start number called the most often in the published annotations is 6, it was called in 59 of the 61 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Amabiko\_36, Anedea\_32, Angela\_33, Bartholomune\_33, Battuta\_34, Birchlyn\_33, BlueOtter\_33, Bmoc\_32, BoomerJR\_36, Bordeaux\_34, Braelyn\_33, Cadmus\_36, CeilingFan\_35, Cross\_33, Cursive\_31, Daubenski\_35, EGole\_33, Elmer\_35, Enygma\_33, Genie2\_36, Gibbi\_38, HangryHippo\_33, IchabodCrane\_34, JimJam\_36, Jollison\_35, Karimac\_35, KentuckyRacer\_36, Larnav\_33, Leo04\_33, Liandry\_33, LilMartin\_33, LukeCage\_35, Lululemon\_32, Marsus\_34, MindFlayer\_34, MulchMansion\_33, Navo\_32, NootNoot\_30, PacManQ\_32, Paradiddles\_30, Peebs\_32, Pepperwood\_33, Persimmon\_30, PinkiePie\_33, PumpkinSpice\_35, Quaran19\_36, Rikishi\_38, Riptide\_33, SaltySpittoon\_36, Samisti12\_32, Scheme\_33, Shuckle\_31, Sollertia\_36, Spelly\_36, Spilled\_36, Squillium\_33, Stanimal\_36, Starbow\_34, Sushi23\_33, Teutsch\_32, TomSawyer\_34, Watermoore\_33, WhereRU\_30, Wipeout\_34, Wofford\_33, Yaboi\_37,

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

- Mugiwara\_37, Tribute\_31,

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

- Mildred21\_34,

### Summary by start number:

Start 6:

- Found in 68 of 69 ( 98.6% ) of genes in pham
- Manual Annotations of this start: 59 of 61
- Called 97.1% of time when present
- Phage (with cluster) where this start called: Amabiko\_36 (BE2), Anedea\_32 (BE1), Angela\_33 (BE1), Bartholomune\_33 (BE1), Battuta\_34 (BE2), Birchlyn\_33 (BE2), BlueOtter\_33 (BE1), Bmoc\_32 (BE1), BoomerJR\_36 (BE2), Bordeaux\_34 (BE2), Braelyn\_33 (BE1), Cadmus\_36 (BE1), CeilingFan\_35 (BE2), Cross\_33 (BE1), Cursive\_31 (BE1), Daubenski\_35 (BE1), EGole\_33 (BE1), Elmer\_35 (BE2), Enygma\_33 (BE2), Genie2\_36 (BE2), Gibbi\_38 (BE2), HangryHippo\_33 (BE1), IchabodCrane\_34 (BE2), JimJam\_36 (BE2), Jollison\_35 (BE2), Karimac\_35 (BE2), KentuckyRacer\_36 (BE2), Larnav\_33 (BE1), Leo04\_33 (BE1), Liandry\_33 (BE1), LilMartin\_33 (BE1), LukeCage\_35 (BE2), Lululemon\_32 (BE1), Marsus\_34 (BE1), MindFlayer\_34 (BE2), MulchMansion\_33 (BE1), Navo\_32 (BE1), NootNoot\_30 (BE1), PacManQ\_32 (BE1), Paradiddles\_30 (BE1), Peebs\_32 (BE1), Pepperwood\_33 (BE1), Persimmon\_30 (BE1), PinkiePie\_33 (BE1), PumpkinSpice\_35 (BE2), Quaran19\_36 (BE2), Rikishi\_38 (BE2), Riptide\_33 (BE1), SaltySpittoon\_36 (BE2), Samisti12\_32 (BE1), Scheme\_33 (BE1), Shuckle\_31 (BE1), Sollertia\_36 (BE2), Spelly\_36 (BE2), Spilled\_36 (BE2), Squillium\_33 (BE1), Stanimal\_36 (BE2), Starbow\_34 (BE2), Sushi23\_33 (BE1), Teutsch\_32 (BE1), TomSawyer\_34 (BE2), Watermoore\_33 (BE1), WhereRU\_30 (BE1), Wipeout\_34 (BE2), Wofford\_33 (BE2), Yaboi\_37 (BE2),

Start 7:

- Found in 1 of 69 ( 1.4% ) of genes in pham
- Manual Annotations of this start: 1 of 61
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mildred21\_34 (BE1),

Start 9:

- Found in 27 of 69 ( 39.1% ) of genes in pham
- Manual Annotations of this start: 1 of 61

- Called 3.7% of time when present
- Phage (with cluster) where this start called: Tribute\_31 (BE1),

Start 11:

- Found in 32 of 69 ( 46.4% ) of genes in pham
- No Manual Annotations of this start.
- Called 3.1% of time when present
- Phage (with cluster) where this start called: Mugiwara\_37 (BE2),

### **Summary by clusters:**

There are 2 clusters represented in this pham: BE2, BE1,

Info for manual annotations of cluster BE1:

- Start number 6 was manually annotated 31 times for cluster BE1.
- Start number 7 was manually annotated 1 time for cluster BE1.
- Start number 9 was manually annotated 1 time for cluster BE1.

Info for manual annotations of cluster BE2:

- Start number 6 was manually annotated 28 times for cluster BE2.

### **Gene Information:**

Gene: Amabiko\_36 Start: 16226, Stop: 16020, Start Num: 6

Candidate Starts for Amabiko\_36:

(1, 16310), (Start: 6 @16226 has 59 MA's), (11, 16193), (20, 16034),

Gene: Anedea\_32 Start: 15212, Stop: 15003, Start Num: 6

Candidate Starts for Anedea\_32:

(Start: 6 @15212 has 59 MA's), (12, 15173), (13, 15161), (14, 15149),

Gene: Angela\_33 Start: 15247, Stop: 15038, Start Num: 6

Candidate Starts for Angela\_33:

(Start: 6 @15247 has 59 MA's), (13, 15196), (14, 15184), (15, 15172), (19, 15064),

Gene: Bartholomune\_33 Start: 14992, Stop: 14789, Start Num: 6

Candidate Starts for Bartholomune\_33:

(Start: 6 @14992 has 59 MA's), (8, 14974), (Start: 9 @14968 has 1 MA's), (13, 14947),

Gene: Battuta\_34 Start: 16202, Stop: 15996, Start Num: 6

Candidate Starts for Battuta\_34:

(1, 16286), (Start: 6 @16202 has 59 MA's), (11, 16169), (20, 16010),

Gene: Birchlyn\_33 Start: 14083, Stop: 13877, Start Num: 6

Candidate Starts for Birchlyn\_33:

(1, 14167), (Start: 6 @14083 has 59 MA's), (11, 14050), (20, 13891),

Gene: BlueOtter\_33 Start: 14943, Stop: 14740, Start Num: 6

Candidate Starts for BlueOtter\_33:

(Start: 6 @14943 has 59 MA's), (Start: 9 @14919 has 1 MA's), (16, 14847),

Gene: Bmoc\_32 Start: 15380, Stop: 15177, Start Num: 6

Candidate Starts for Bmoc\_32:

(Start: 6 @15380 has 59 MA's), (17, 15254),

Gene: BoomerJR\_36 Start: 16035, Stop: 15829, Start Num: 6

Candidate Starts for BoomerJR\_36:

(Start: 6 @16035 has 59 MA's), (11, 16002), (17, 15906), (20, 15843),

Gene: Bordeaux\_34 Start: 16217, Stop: 16011, Start Num: 6

Candidate Starts for Bordeaux\_34:

(1, 16301), (Start: 6 @16217 has 59 MA's), (11, 16184), (20, 16025),

Gene: Braelyn\_33 Start: 15387, Stop: 15184, Start Num: 6

Candidate Starts for Braelyn\_33:

(Start: 6 @15387 has 59 MA's), (8, 15369), (Start: 9 @15363 has 1 MA's), (13, 15342),

Gene: Cadmus\_36 Start: 14591, Stop: 14382, Start Num: 6

Candidate Starts for Cadmus\_36:

(3, 14639), (Start: 6 @14591 has 59 MA's), (13, 14540), (16, 14489), (18, 14426),

Gene: CeilingFan\_35 Start: 15977, Stop: 15771, Start Num: 6

Candidate Starts for CeilingFan\_35:

(1, 16061), (Start: 6 @15977 has 59 MA's), (11, 15944), (20, 15785),

Gene: Cross\_33 Start: 14944, Stop: 14741, Start Num: 6

Candidate Starts for Cross\_33:

(Start: 6 @14944 has 59 MA's), (Start: 9 @14920 has 1 MA's), (16, 14848),

Gene: Cursive\_31 Start: 13761, Stop: 13558, Start Num: 6

Candidate Starts for Cursive\_31:

(Start: 6 @13761 has 59 MA's), (Start: 9 @13737 has 1 MA's), (16, 13665),

Gene: Daubenski\_35 Start: 15355, Stop: 15146, Start Num: 6

Candidate Starts for Daubenski\_35:

(3, 15403), (Start: 6 @15355 has 59 MA's), (13, 15304), (16, 15253), (18, 15190),

Gene: EGole\_33 Start: 15805, Stop: 15602, Start Num: 6

Candidate Starts for EGole\_33:

(Start: 6 @15805 has 59 MA's), (10, 15778), (13, 15760), (17, 15679), (20, 15616),

Gene: Elmer\_35 Start: 15504, Stop: 15298, Start Num: 6

Candidate Starts for Elmer\_35:

(4, 15549), (5, 15540), (Start: 6 @15504 has 59 MA's), (11, 15471), (20, 15312),

Gene: Enygma\_33 Start: 15348, Stop: 15142, Start Num: 6

Candidate Starts for Enygma\_33:

(1, 15432), (Start: 6 @15348 has 59 MA's), (11, 15315), (20, 15156),

Gene: Genie2\_36 Start: 16038, Stop: 15832, Start Num: 6

Candidate Starts for Genie2\_36:

(Start: 6 @16038 has 59 MA's), (11, 16005), (17, 15909), (20, 15846),

Gene: Gibbi\_38 Start: 15837, Stop: 15631, Start Num: 6

Candidate Starts for Gibbi\_38:

(1, 15921), (Start: 6 @15837 has 59 MA's), (11, 15804), (20, 15645),

Gene: HangryHippo\_33 Start: 14943, Stop: 14740, Start Num: 6

Candidate Starts for HangryHippo\_33:

(Start: 6 @14943 has 59 MA's), (Start: 9 @14919 has 1 MA's), (16, 14847),

Gene: IchabodCrane\_34 Start: 15929, Stop: 15723, Start Num: 6

Candidate Starts for IchabodCrane\_34:

(1, 16013), (Start: 6 @15929 has 59 MA's), (11, 15896), (20, 15737),

Gene: JimJam\_36 Start: 16165, Stop: 15959, Start Num: 6

Candidate Starts for JimJam\_36:

(1, 16249), (Start: 6 @16165 has 59 MA's), (11, 16132), (20, 15973),

Gene: Jollison\_35 Start: 16183, Stop: 15977, Start Num: 6

Candidate Starts for Jollison\_35:

(1, 16267), (Start: 6 @16183 has 59 MA's), (11, 16150), (20, 15991),

Gene: Karimac\_35 Start: 16332, Stop: 16126, Start Num: 6

Candidate Starts for Karimac\_35:

(1, 16416), (Start: 6 @16332 has 59 MA's), (11, 16299), (20, 16140),

Gene: KentuckyRacer\_36 Start: 15978, Stop: 15772, Start Num: 6

Candidate Starts for KentuckyRacer\_36:

(1, 16062), (Start: 6 @15978 has 59 MA's), (11, 15945), (20, 15786),

Gene: Larnav\_33 Start: 14891, Stop: 14688, Start Num: 6

Candidate Starts for Larnav\_33:

(Start: 6 @14891 has 59 MA's), (Start: 9 @14867 has 1 MA's), (16, 14795),

Gene: Leo04\_33 Start: 14942, Stop: 14739, Start Num: 6

Candidate Starts for Leo04\_33:

(Start: 6 @14942 has 59 MA's), (Start: 9 @14918 has 1 MA's), (16, 14846),

Gene: Liandry\_33 Start: 14991, Stop: 14788, Start Num: 6

Candidate Starts for Liandry\_33:

(Start: 6 @14991 has 59 MA's), (8, 14973), (Start: 9 @14967 has 1 MA's), (13, 14946), (19, 14814),

Gene: LilMartin\_33 Start: 15194, Stop: 14985, Start Num: 6

Candidate Starts for LilMartin\_33:

(Start: 6 @15194 has 59 MA's), (13, 15143), (14, 15131), (15, 15119), (19, 15011),

Gene: LukeCage\_35 Start: 15915, Stop: 15709, Start Num: 6

Candidate Starts for LukeCage\_35:

(1, 15999), (Start: 6 @15915 has 59 MA's), (11, 15882), (20, 15723),

Gene: Lululemon\_32 Start: 14323, Stop: 14120, Start Num: 6

Candidate Starts for Lululemon\_32:

(Start: 6 @14323 has 59 MA's), (Start: 9 @14299 has 1 MA's), (16, 14227),

Gene: Marsus\_34 Start: 15071, Stop: 14862, Start Num: 6

Candidate Starts for Marsus\_34:

(Start: 6 @15071 has 59 MA's), (13, 15020), (15, 14996),

Gene: Mildred21\_34 Start: 15301, Stop: 15098, Start Num: 7

Candidate Starts for Mildred21\_34:

(Start: 7 @15301 has 1 MA's), (11, 15271),

Gene: MindFlayer\_34 Start: 15836, Stop: 15630, Start Num: 6

Candidate Starts for MindFlayer\_34:

(1, 15920), (Start: 6 @15836 has 59 MA's), (11, 15803), (20, 15644),

Gene: Mugiwara\_37 Start: 15798, Stop: 15625, Start Num: 11

Candidate Starts for Mugiwara\_37:

(1, 15915), (2, 15888), (Start: 6 @15831 has 59 MA's), (11, 15798), (20, 15639),

Gene: MulchMansion\_33 Start: 15195, Stop: 14986, Start Num: 6

Candidate Starts for MulchMansion\_33:

(Start: 6 @15195 has 59 MA's), (13, 15144), (14, 15132), (15, 15120), (19, 15012),

Gene: Navo\_32 Start: 15150, Stop: 14947, Start Num: 6

Candidate Starts for Navo\_32:

(Start: 6 @15150 has 59 MA's), (8, 15132), (Start: 9 @15126 has 1 MA's), (13, 15105), (19, 14973),

Gene: NootNoot\_30 Start: 14173, Stop: 13970, Start Num: 6

Candidate Starts for NootNoot\_30:

(Start: 6 @14173 has 59 MA's), (8, 14155), (Start: 9 @14149 has 1 MA's), (13, 14128), (19, 13996),

Gene: PacManQ\_32 Start: 14323, Stop: 14120, Start Num: 6

Candidate Starts for PacManQ\_32:

(Start: 6 @14323 has 59 MA's), (Start: 9 @14299 has 1 MA's), (16, 14227),

Gene: Paradiddles\_30 Start: 14164, Stop: 13961, Start Num: 6

Candidate Starts for Paradiddles\_30:

(Start: 6 @14164 has 59 MA's), (8, 14146), (Start: 9 @14140 has 1 MA's), (13, 14119),

Gene: Peebs\_32 Start: 14642, Stop: 14439, Start Num: 6

Candidate Starts for Peebs\_32:

(Start: 6 @14642 has 59 MA's), (Start: 9 @14618 has 1 MA's), (16, 14546),

Gene: Pepperwood\_33 Start: 14815, Stop: 14612, Start Num: 6

Candidate Starts for Pepperwood\_33:

(Start: 6 @14815 has 59 MA's), (Start: 9 @14791 has 1 MA's),

Gene: Persimmon\_30 Start: 14221, Stop: 14018, Start Num: 6

Candidate Starts for Persimmon\_30:

(Start: 6 @14221 has 59 MA's), (8, 14203), (Start: 9 @14197 has 1 MA's), (13, 14176),

Gene: PinkiePie\_33 Start: 14992, Stop: 14789, Start Num: 6

Candidate Starts for PinkiePie\_33:

(Start: 6 @14992 has 59 MA's), (8, 14974), (Start: 9 @14968 has 1 MA's), (13, 14947), (19, 14815),

Gene: PumpkinSpice\_35 Start: 16226, Stop: 16020, Start Num: 6

Candidate Starts for PumpkinSpice\_35:

(1, 16310), (Start: 6 @16226 has 59 MA's), (11, 16193), (20, 16034),

Gene: Quaran19\_36 Start: 16217, Stop: 16011, Start Num: 6

Candidate Starts for Quaran19\_36:

(1, 16301), (Start: 6 @16217 has 59 MA's), (11, 16184), (20, 16025),

Gene: Rikishi\_38 Start: 16132, Stop: 15926, Start Num: 6

Candidate Starts for Rikishi\_38:

(1, 16216), (Start: 6 @16132 has 59 MA's), (11, 16099), (20, 15940),

Gene: Riptide\_33 Start: 14938, Stop: 14729, Start Num: 6

Candidate Starts for Riptide\_33:

(Start: 6 @14938 has 59 MA's), (12, 14899), (13, 14887), (14, 14875),

Gene: SaltySpittoon\_36 Start: 16226, Stop: 16020, Start Num: 6

Candidate Starts for SaltySpittoon\_36:

(1, 16310), (Start: 6 @16226 has 59 MA's), (11, 16193), (20, 16034),

Gene: Samisti12\_32 Start: 15412, Stop: 15209, Start Num: 6

Candidate Starts for Samisti12\_32:

(Start: 6 @15412 has 59 MA's), (Start: 9 @15388 has 1 MA's),

Gene: Scheme\_33 Start: 14826, Stop: 14623, Start Num: 6

Candidate Starts for Scheme\_33:

(Start: 6 @14826 has 59 MA's), (Start: 9 @14802 has 1 MA's),

Gene: Shuckle\_31 Start: 15095, Stop: 14892, Start Num: 6

Candidate Starts for Shuckle\_31:

(Start: 6 @15095 has 59 MA's), (Start: 9 @15071 has 1 MA's), (16, 14999),

Gene: Sollertia\_36 Start: 16038, Stop: 15832, Start Num: 6

Candidate Starts for Sollertia\_36:

(Start: 6 @16038 has 59 MA's), (11, 16005), (17, 15909), (20, 15846),

Gene: Spelly\_36 Start: 16181, Stop: 15975, Start Num: 6

Candidate Starts for Spelly\_36:

(1, 16265), (Start: 6 @16181 has 59 MA's), (11, 16148), (20, 15989),

Gene: Spilled\_36 Start: 15935, Stop: 15729, Start Num: 6

Candidate Starts for Spilled\_36:

(1, 16019), (Start: 6 @15935 has 59 MA's), (11, 15902), (20, 15743),

Gene: Squillium\_33 Start: 14991, Stop: 14788, Start Num: 6

Candidate Starts for Squillium\_33:

(Start: 6 @14991 has 59 MA's), (8, 14973), (Start: 9 @14967 has 1 MA's), (13, 14946), (19, 14814),

Gene: Stanimal\_36 Start: 16038, Stop: 15832, Start Num: 6

Candidate Starts for Stanimal\_36:

(Start: 6 @16038 has 59 MA's), (11, 16005), (17, 15909), (20, 15846),

Gene: Starbow\_34 Start: 16202, Stop: 15996, Start Num: 6

Candidate Starts for Starbow\_34:

(1, 16286), (Start: 6 @16202 has 59 MA's), (11, 16169), (20, 16010),



Gene: Sushi23\_33 Start: 15038, Stop: 14835, Start Num: 6  
Candidate Starts for Sushi23\_33:  
(Start: 6 @15038 has 59 MA's), (Start: 9 @15014 has 1 MA's),

Gene: Teutsch\_32 Start: 14731, Stop: 14528, Start Num: 6  
Candidate Starts for Teutsch\_32:  
(Start: 6 @14731 has 59 MA's), (Start: 9 @14707 has 1 MA's),

Gene: TomSawyer\_34 Start: 15820, Stop: 15614, Start Num: 6  
Candidate Starts for TomSawyer\_34:  
(1, 15904), (Start: 6 @15820 has 59 MA's), (11, 15787), (20, 15628),

Gene: Tribute\_31 Start: 14485, Stop: 14306, Start Num: 9  
Candidate Starts for Tribute\_31:  
(Start: 6 @14509 has 59 MA's), (Start: 9 @14485 has 1 MA's), (16, 14413),

Gene: Watermoore\_33 Start: 14944, Stop: 14741, Start Num: 6  
Candidate Starts for Watermoore\_33:  
(Start: 6 @14944 has 59 MA's), (Start: 9 @14920 has 1 MA's), (16, 14848),

Gene: WhereRU\_30 Start: 14221, Stop: 14018, Start Num: 6  
Candidate Starts for WhereRU\_30:  
(Start: 6 @14221 has 59 MA's), (8, 14203), (Start: 9 @14197 has 1 MA's), (13, 14176),

Gene: Wipeout\_34 Start: 15842, Stop: 15636, Start Num: 6  
Candidate Starts for Wipeout\_34:  
(1, 15926), (Start: 6 @15842 has 59 MA's), (11, 15809), (20, 15650),

Gene: Wofford\_33 Start: 14982, Stop: 14776, Start Num: 6  
Candidate Starts for Wofford\_33:  
(4, 15027), (5, 15018), (Start: 6 @14982 has 59 MA's), (11, 14949), (20, 14790),

Gene: Yaboi\_37 Start: 16014, Stop: 15808, Start Num: 6  
Candidate Starts for Yaboi\_37:  
(Start: 6 @16014 has 59 MA's), (11, 15981), (17, 15885), (20, 15822),