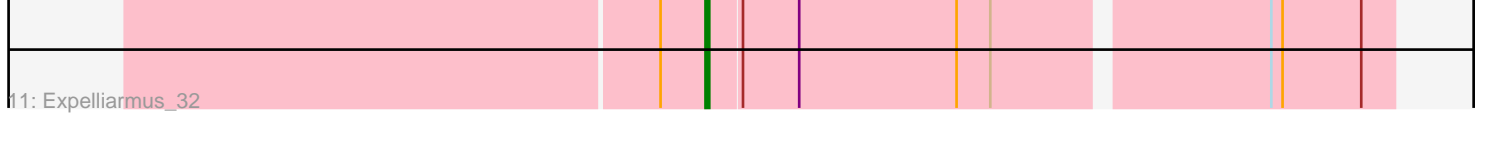
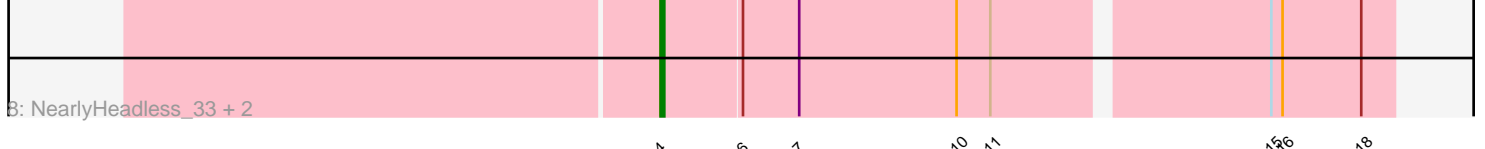
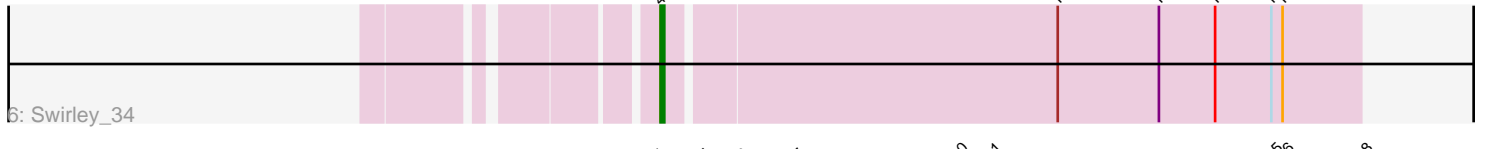
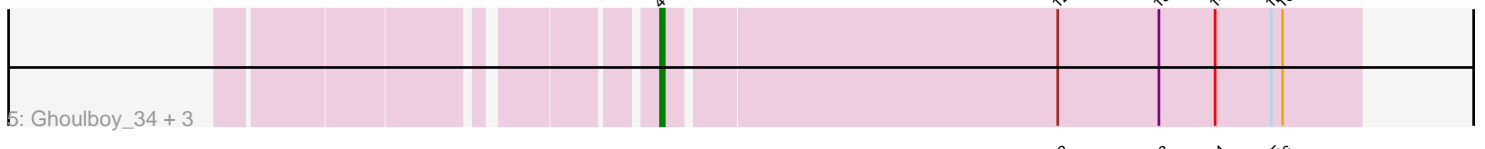
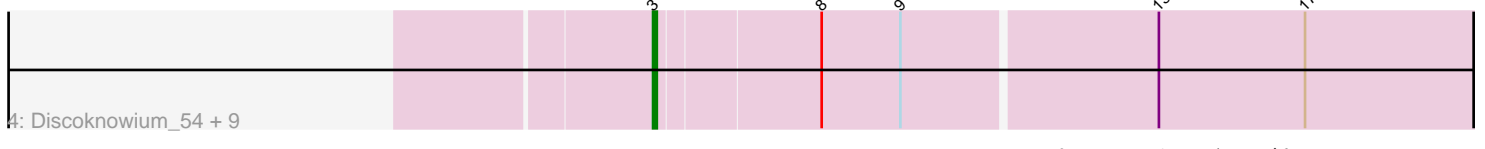
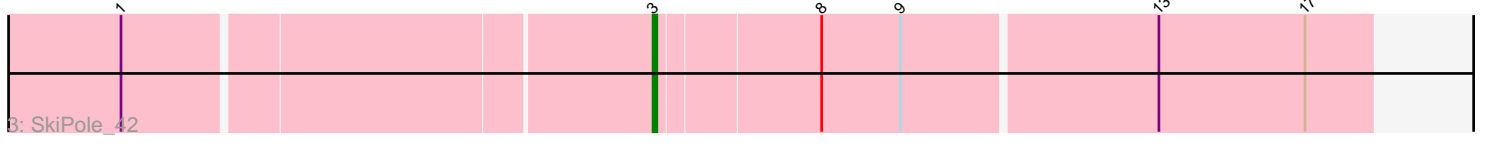
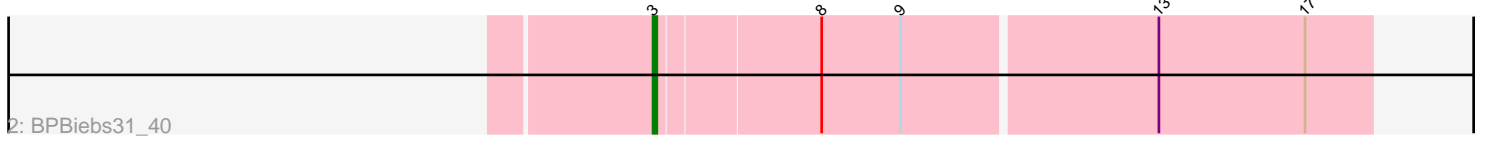
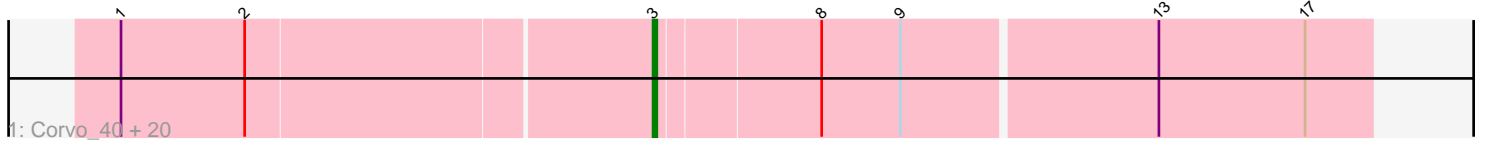


Pham 200350



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 200350 Report

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

Pham number 200350 has 48 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Corvo\_40, BluSpix\_36, ConceptII\_41, LilBib\_39, SwissCheese\_41, HanShotFirst\_38, Kanely\_40, Forsytheast\_39, Marchy\_34, MetalQZJ\_39, Gandalf20\_40, IgnatiusPatJac\_38, ShortQueendom\_34, Moose\_39, Altman\_41, Teodoridan\_37, MaryBeth\_39, Watermelon\_41, STLscum\_40, Mryolo\_37, Payneful\_39
- Track 2 : BPBiebs31\_40
- Track 3 : SkiPole\_42
- Track 4 : Discoknowium\_54, Jovo\_56, Lev2\_56, Conspiracy\_56, Archetta\_55, ForGetIt\_56, Tiger\_55, AgentM\_55, Aragog\_55, Phlorence\_54
- Track 5 : Ghouboy\_34, SydNat\_34, Zolita\_33, Micasa\_34
- Track 6 : Swirley\_34
- Track 7 : Danforth\_32, Roary\_33
- Track 8 : NearlyHeadless\_33, Stephig9\_33, Dixon\_33
- Track 9 : Groundhog\_32, Smeadley\_33, Astro\_33
- Track 10 : Phillis\_33
- Track 11 : Expelliarmus\_32

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

The start number called the most often in the published annotations is 3, it was called in 31 of the 46 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AgentM\_55, Altman\_41, Aragog\_55, Archetta\_55, BPBiebs31\_40, BluSpix\_36, ConceptII\_41, Conspiracy\_56, Corvo\_40, Discoknowium\_54, ForGetIt\_56, Forsytheast\_39, Gandalf20\_40, HanShotFirst\_38, IgnatiusPatJac\_38, Jovo\_56, Kanely\_40, Lev2\_56, LilBib\_39, Marchy\_34, MaryBeth\_39, MetalQZJ\_39, Moose\_39, Mryolo\_37, Payneful\_39, Phlorence\_54, STLscum\_40, ShortQueendom\_34, SkiPole\_42, SwissCheese\_41, Teodoridan\_37, Tiger\_55, Watermelon\_41,

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

- 

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

- Astro\_33, Danforth\_32, Dixon\_33, Expelliarmus\_32, Ghoulboy\_34, Groundhog\_32, Micasa\_34, NearlyHeadless\_33, Phillis\_33, Roary\_33, Smeadley\_33, Stephig9\_33, Swirley\_34, SydNat\_34, Zolita\_33,

### Summary by start number:

#### Start 3:

- Found in 33 of 48 ( 68.8% ) of genes in pham
- Manual Annotations of this start: 31 of 46
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AgentM\_55 (A5), Altman\_41 (A1), Aragog\_55 (A5), Archetta\_55 (A5), BPBiebs31\_40 (A1), BluSpix\_36 (A1), Conceptll\_41 (A1), Conspiracy\_56 (A5), Corvo\_40 (A1), Discoknowium\_54 (A5), ForGetIt\_56 (A5), Forsytheast\_39 (A1), Gandalf20\_40 (A1), HanShotFirst\_38 (A1), IgnatiusPatJac\_38 (A1), Jovo\_56 (A5), Kanely\_40 (A1), Lev2\_56 (A5), LilBib\_39 (A1), Marchy\_34 (A1), MaryBeth\_39 (A1), MetalQZJ\_39 (A1), Moose\_39 (A1), Mryolo\_37 (A1), Payneful\_39 (A1), Phlorence\_54 (A5), STLscum\_40 (A1), ShortQueendom\_34 (A1), SkiPole\_42 (A1), SwissCheese\_41 (A1), Teodoridan\_37 (A1), Tiger\_55 (A5), Watermelon\_41 (A1),

#### Start 4:

- Found in 15 of 48 ( 31.2% ) of genes in pham
- Manual Annotations of this start: 14 of 46
- Called 93.3% of time when present
- Phage (with cluster) where this start called: Astro\_33 (A8), Danforth\_32 (A8), Dixon\_33 (A8), Ghoulboy\_34 (A5), Groundhog\_32 (A8), Micasa\_34 (A5), NearlyHeadless\_33 (A8), Phillis\_33 (A8), Roary\_33 (A8), Smeadley\_33 (A8), Stephig9\_33 (A8), Swirley\_34 (A5), SydNat\_34 (A5), Zolita\_33 (A5),

#### Start 5:

- Found in 4 of 48 ( 8.3% ) of genes in pham
- Manual Annotations of this start: 1 of 46
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Expelliarmus\_32 (A8),

### Summary by clusters:

There are 3 clusters represented in this pham: A1, A8, A5,

Info for manual annotations of cluster A1:

- Start number 3 was manually annotated 21 times for cluster A1.

Info for manual annotations of cluster A5:

- Start number 3 was manually annotated 10 times for cluster A5.
- Start number 4 was manually annotated 5 times for cluster A5.

Info for manual annotations of cluster A8:

- Start number 4 was manually annotated 9 times for cluster A8.
- Start number 5 was manually annotated 1 time for cluster A8.

### Gene Information:

Gene: AgentM\_55 Start: 38824, Stop: 38606, Start Num: 3  
Candidate Starts for AgentM\_55:  
(Start: 3 @38824 has 31 MA's), (8, 38782), (9, 38761), (13, 38695), (17, 38656),

Gene: Altman\_41 Start: 32441, Stop: 32256, Start Num: 3  
Candidate Starts for Altman\_41:  
(1, 32579), (2, 32546), (Start: 3 @32441 has 31 MA's), (8, 32399), (9, 32378), (13, 32312), (17, 32273),

Gene: Aragog\_55 Start: 38844, Stop: 38626, Start Num: 3  
Candidate Starts for Aragog\_55:  
(Start: 3 @38844 has 31 MA's), (8, 38802), (9, 38781), (13, 38715), (17, 38676),

Gene: Archetta\_55 Start: 39254, Stop: 39036, Start Num: 3  
Candidate Starts for Archetta\_55:  
(Start: 3 @39254 has 31 MA's), (8, 39212), (9, 39191), (13, 39125), (17, 39086),

Gene: Astro\_33 Start: 26479, Stop: 26291, Start Num: 4  
Candidate Starts for Astro\_33:  
(Start: 4 @26479 has 14 MA's), (6, 26458), (7, 26443), (10, 26401), (11, 26392), (15, 26323), (16, 26320), (18, 26299),

Gene: BPBiebs31\_40 Start: 31925, Stop: 31740, Start Num: 3  
Candidate Starts for BPBiebs31\_40:  
(Start: 3 @31925 has 31 MA's), (8, 31883), (9, 31862), (13, 31796), (17, 31757),

Gene: BluSpix\_36 Start: 27533, Stop: 27348, Start Num: 3  
Candidate Starts for BluSpix\_36:  
(1, 27671), (2, 27638), (Start: 3 @27533 has 31 MA's), (8, 27491), (9, 27470), (13, 27404), (17, 27365),

Gene: ConceptII\_41 Start: 32595, Stop: 32362, Start Num: 3  
Candidate Starts for ConceptII\_41:  
(1, 32733), (2, 32700), (Start: 3 @32595 has 31 MA's), (8, 32553), (9, 32532), (13, 32466), (17, 32427),

Gene: Conspiracy\_56 Start: 39066, Stop: 38848, Start Num: 3  
Candidate Starts for Conspiracy\_56:  
(Start: 3 @39066 has 31 MA's), (8, 39024), (9, 39003), (13, 38937), (17, 38898),

Gene: Corvo\_40 Start: 32455, Stop: 32270, Start Num: 3  
Candidate Starts for Corvo\_40:  
(1, 32593), (2, 32560), (Start: 3 @32455 has 31 MA's), (8, 32413), (9, 32392), (13, 32326), (17, 32287),

Gene: Danforth\_32 Start: 26364, Stop: 26176, Start Num: 4  
Candidate Starts for Danforth\_32:  
(Start: 4 @26364 has 14 MA's), (Start: 5 @26352 has 1 MA's), (6, 26343), (7, 26328), (10, 26286), (11, 26277), (15, 26208), (16, 26205), (18, 26184),

Gene: Discoknowium\_54 Start: 38733, Stop: 38515, Start Num: 3  
Candidate Starts for Discoknowium\_54:  
(Start: 3 @38733 has 31 MA's), (8, 38691), (9, 38670), (13, 38604), (17, 38565),

Gene: Dixon\_33 Start: 26473, Stop: 26285, Start Num: 4  
Candidate Starts for Dixon\_33:

(Start: 4 @26473 has 14 MA's), (6, 26452), (7, 26437), (10, 26395), (11, 26386), (15, 26317), (16, 26314), (18, 26293),

Gene: Expelliarmus\_32 Start: 26338, Stop: 26162, Start Num: 5

Candidate Starts for Expelliarmus\_32:

(Start: 4 @26350 has 14 MA's), (Start: 5 @26338 has 1 MA's), (6, 26329), (7, 26314), (10, 26272), (11, 26263), (15, 26194), (16, 26191), (18, 26170),

Gene: ForGetIt\_56 Start: 39091, Stop: 38873, Start Num: 3

Candidate Starts for ForGetIt\_56:

(Start: 3 @39091 has 31 MA's), (8, 39049), (9, 39028), (13, 38962), (17, 38923),

Gene: Forsytheast\_39 Start: 31733, Stop: 31548, Start Num: 3

Candidate Starts for Forsytheast\_39:

(1, 31871), (2, 31838), (Start: 3 @31733 has 31 MA's), (8, 31691), (9, 31670), (13, 31604), (17, 31565),

Gene: Gandalf20\_40 Start: 32430, Stop: 32245, Start Num: 3

Candidate Starts for Gandalf20\_40:

(1, 32568), (2, 32535), (Start: 3 @32430 has 31 MA's), (8, 32388), (9, 32367), (13, 32301), (17, 32262),

Gene: Ghoulboy\_34 Start: 27580, Stop: 27398, Start Num: 4

Candidate Starts for Ghoulboy\_34:

(Start: 4 @27580 has 14 MA's), (12, 27478), (13, 27451), (14, 27436), (15, 27421), (16, 27418),

Gene: Groundhog\_32 Start: 26444, Stop: 26256, Start Num: 4

Candidate Starts for Groundhog\_32:

(Start: 4 @26444 has 14 MA's), (6, 26423), (7, 26408), (10, 26366), (11, 26357), (15, 26288), (16, 26285), (18, 26264),

Gene: HanShotFirst\_38 Start: 31085, Stop: 30900, Start Num: 3

Candidate Starts for HanShotFirst\_38:

(1, 31223), (2, 31190), (Start: 3 @31085 has 31 MA's), (8, 31043), (9, 31022), (13, 30956), (17, 30917),

Gene: IgnatiusPatJac\_38 Start: 31478, Stop: 31293, Start Num: 3

Candidate Starts for IgnatiusPatJac\_38:

(1, 31616), (2, 31583), (Start: 3 @31478 has 31 MA's), (8, 31436), (9, 31415), (13, 31349), (17, 31310),

Gene: Jovo\_56 Start: 39347, Stop: 39129, Start Num: 3

Candidate Starts for Jovo\_56:

(Start: 3 @39347 has 31 MA's), (8, 39305), (9, 39284), (13, 39218), (17, 39179),

Gene: Kanely\_40 Start: 32217, Stop: 32032, Start Num: 3

Candidate Starts for Kanely\_40:

(1, 32355), (2, 32322), (Start: 3 @32217 has 31 MA's), (8, 32175), (9, 32154), (13, 32088), (17, 32049),

Gene: Lev2\_56 Start: 38979, Stop: 38761, Start Num: 3

Candidate Starts for Lev2\_56:

(Start: 3 @38979 has 31 MA's), (8, 38937), (9, 38916), (13, 38850), (17, 38811),

Gene: LilBib\_39 Start: 32292, Stop: 32104, Start Num: 3

Candidate Starts for LilBib\_39:

(1, 32430), (2, 32397), (Start: 3 @32292 has 31 MA's), (8, 32247), (9, 32226), (13, 32160), (17, 32121),

Gene: Marchy\_34 Start: 28457, Stop: 28272, Start Num: 3

Candidate Starts for Marchy\_34:

(1, 28595), (2, 28562), (Start: 3 @28457 has 31 MA's), (8, 28415), (9, 28394), (13, 28328), (17, 28289),

Gene: MaryBeth\_39 Start: 31672, Stop: 31487, Start Num: 3

Candidate Starts for MaryBeth\_39:

(1, 31810), (2, 31777), (Start: 3 @31672 has 31 MA's), (8, 31630), (9, 31609), (13, 31543), (17, 31504),

Gene: MetalQZJ\_39 Start: 31672, Stop: 31487, Start Num: 3

Candidate Starts for MetalQZJ\_39:

(1, 31810), (2, 31777), (Start: 3 @31672 has 31 MA's), (8, 31630), (9, 31609), (13, 31543), (17, 31504),

Gene: Micasa\_34 Start: 27303, Stop: 27121, Start Num: 4

Candidate Starts for Micasa\_34:

(Start: 4 @27303 has 14 MA's), (12, 27201), (13, 27174), (14, 27159), (15, 27144), (16, 27141),

Gene: Moose\_39 Start: 31733, Stop: 31548, Start Num: 3

Candidate Starts for Moose\_39:

(1, 31871), (2, 31838), (Start: 3 @31733 has 31 MA's), (8, 31691), (9, 31670), (13, 31604), (17, 31565),

Gene: Mryolo\_37 Start: 31217, Stop: 31032, Start Num: 3

Candidate Starts for Mryolo\_37:

(1, 31355), (2, 31322), (Start: 3 @31217 has 31 MA's), (8, 31175), (9, 31154), (13, 31088), (17, 31049),

Gene: NearlyHeadless\_33 Start: 26403, Stop: 26215, Start Num: 4

Candidate Starts for NearlyHeadless\_33:

(Start: 4 @26403 has 14 MA's), (6, 26382), (7, 26367), (10, 26325), (11, 26316), (15, 26247), (16, 26244), (18, 26223),

Gene: Payneful\_39 Start: 31174, Stop: 30989, Start Num: 3

Candidate Starts for Payneful\_39:

(1, 31312), (2, 31279), (Start: 3 @31174 has 31 MA's), (8, 31132), (9, 31111), (13, 31045), (17, 31006),

Gene: Phillis\_33 Start: 26429, Stop: 26241, Start Num: 4

Candidate Starts for Phillis\_33:

(Start: 4 @26429 has 14 MA's), (Start: 5 @26417 has 1 MA's), (6, 26408), (7, 26393), (10, 26351), (15, 26273), (16, 26270), (18, 26249),

Gene: Phlorence\_54 Start: 38724, Stop: 38506, Start Num: 3

Candidate Starts for Phlorence\_54:

(Start: 3 @38724 has 31 MA's), (8, 38682), (9, 38661), (13, 38595), (17, 38556),

Gene: Roary\_33 Start: 26349, Stop: 26161, Start Num: 4

Candidate Starts for Roary\_33:

(Start: 4 @26349 has 14 MA's), (Start: 5 @26337 has 1 MA's), (6, 26328), (7, 26313), (10, 26271), (11, 26262), (15, 26193), (16, 26190), (18, 26169),

Gene: STLscum\_40 Start: 32567, Stop: 32382, Start Num: 3

Candidate Starts for STLscum\_40:

(1, 32705), (2, 32672), (Start: 3 @32567 has 31 MA's), (8, 32525), (9, 32504), (13, 32438), (17, 32399),

Gene: ShortQueendom\_34 Start: 28214, Stop: 28029, Start Num: 3

Candidate Starts for ShortQueendom\_34:

(1, 28352), (2, 28319), (Start: 3 @28214 has 31 MA's), (8, 28172), (9, 28151), (13, 28085), (17, 28046),

Gene: SkiPole\_42 Start: 32086, Stop: 31901, Start Num: 3

Candidate Starts for SkiPole\_42:

(1, 32221), (Start: 3 @32086 has 31 MA's), (8, 32044), (9, 32023), (13, 31957), (17, 31918),

Gene: Smeadley\_33 Start: 26472, Stop: 26284, Start Num: 4

Candidate Starts for Smeadley\_33:

(Start: 4 @26472 has 14 MA's), (6, 26451), (7, 26436), (10, 26394), (11, 26385), (15, 26316), (16, 26313), (18, 26292),

Gene: Stephig9\_33 Start: 26377, Stop: 26189, Start Num: 4

Candidate Starts for Stephig9\_33:

(Start: 4 @26377 has 14 MA's), (6, 26356), (7, 26341), (10, 26299), (11, 26290), (15, 26221), (16, 26218), (18, 26197),

Gene: Swirley\_34 Start: 27310, Stop: 27128, Start Num: 4

Candidate Starts for Swirley\_34:

(Start: 4 @27310 has 14 MA's), (12, 27208), (13, 27181), (14, 27166), (15, 27151), (16, 27148),

Gene: SwissCheese\_41 Start: 32233, Stop: 32048, Start Num: 3

Candidate Starts for SwissCheese\_41:

(1, 32371), (2, 32338), (Start: 3 @32233 has 31 MA's), (8, 32191), (9, 32170), (13, 32104), (17, 32065),

Gene: SydNat\_34 Start: 27589, Stop: 27407, Start Num: 4

Candidate Starts for SydNat\_34:

(Start: 4 @27589 has 14 MA's), (12, 27487), (13, 27460), (14, 27445), (15, 27430), (16, 27427),

Gene: Teodoridan\_37 Start: 31023, Stop: 30790, Start Num: 3

Candidate Starts for Teodoridan\_37:

(1, 31161), (2, 31128), (Start: 3 @31023 has 31 MA's), (8, 30981), (9, 30960), (13, 30894), (17, 30855),

Gene: Tiger\_55 Start: 38645, Stop: 38427, Start Num: 3

Candidate Starts for Tiger\_55:

(Start: 3 @38645 has 31 MA's), (8, 38603), (9, 38582), (13, 38516), (17, 38477),

Gene: Watermelon\_41 Start: 32437, Stop: 32249, Start Num: 3

Candidate Starts for Watermelon\_41:

(1, 32575), (2, 32542), (Start: 3 @32437 has 31 MA's), (8, 32392), (9, 32371), (13, 32305), (17, 32266),

Gene: Zolita\_33 Start: 27593, Stop: 27411, Start Num: 4

Candidate Starts for Zolita\_33:

(Start: 4 @27593 has 14 MA's), (12, 27491), (13, 27464), (14, 27449), (15, 27434), (16, 27431),