Pham 291423

1: Ranunculus_72
2: Rizwana_60
3: Tank_60 + 1
4: RazzB_79 + 1
5: DogYard_79 + 1
6: Pureglobe5_78 + 6
7: Nikan_77
8: Ollypop_74
9: PhuzzTulsa_77 + 2
10: Beagle_80
11: Ren19_73
12: BruhMoment_69
13: AWGoat_56
14: SilentRX_58
15: RomansRevenge_63 + 1
16: Sunfish_60
17: Kithara_52

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 291423 Report

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

Pham number 291423 has 29 members, 9 are drafts.

Phages represented in each track:
• Track 1 : Ranunculus_72
• Track 2 : Rizwana_60
• Track 3 : Tank_60, Wilde_62
• Track 4 : RazzB_79, Forrestell_79
• Track 5 : DogYard_79, NyleyClemson_79
• Track 6 : Pureglobe5_78, Pointis_76, Popstraw_75, Hive_75, Kubulix_79, BetaFish_79, Odyssey395_80
• Track 7 : Nikan_77
• Track 8 : Ollypop_74
• Track 9 : PhuzzTulsa_77, MellowYellow_80, RIPWilbur_78
• Track 10 : Beagle_80
• Track 11 : Ren19_73
• Track 12 : BruhMoment_69
• Track 13 : AWGoat_56
• Track 14 : SilentRX_58
• Track 15 : RomansRevenge_63, Boise_62
• Track 16 : Sunfish_60
• Track 17 : Kithara_52

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

The start number called the most often in the published annotations is 17, it was called in 10 of the 20 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• BetaFish_79, DogYard_79, Forrestell_79, Hive_75, Kubulix_79, MellowYellow_80, Nikan_77, NyleyClemson_79, Odyssey395_80, Ollypop_74, PhuzzTulsa_77, Pointis_76, Popstraw_75, Pureglobe5_78, RIPWilbur_78, Ranunculus_72, RazzB_79,

Genes that have the "Most Annotated" start but do not call it:
• Beagle_80, Ren19_73,

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

• AWGoat_56, Boise_62, BruhMoment_69, Kithara_52, Rizwana_60, RomansRevenge_63, SilentRX_58, Sunfish_60, Tank_60, Wilde_62,

Summary by start number:

Start 1:
• Found in 13 of 29 (44.8%) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 7.7% of time when present
• Phage (with cluster) where this start called: Beagle_80 (AP2),

Start 3:
• Found in 1 of 29 (3.4%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ren19_73 (AP2),

Start 13:
• Found in 1 of 29 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sunfish_60 (singleton),

Start 17:
• Found in 19 of 29 (65.5%) of genes in pham
• Manual Annotations of this start: 10 of 20
• Called 89.5% of time when present
• Phage (with cluster) where this start called: BetaFish_79 (AP2), DogYard_79 (AP2), Forrestell_79 (AP2), Hive_75 (AP2), Kubulix_79 (AP2), MellowYellow_80 (AP2), Nikan_77 (AP2), NyleyClemson_79 (AP2), Odyssey395_80 (AP2), Ollypop_74 (AP2), PhuzzTulsa_77 (AP2), Pointis_76 (AP2), Popstraw_75 (AP2), Pureglobe5_78 (AP2), RIPWilbur_78 (AP2), Ranunculus_72 (AP), RazzB_79 (AP2),

Start 18:
• Found in 2 of 29 (6.9%) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Boise_62 (FT), RomansRevenge_63 (FT),

Start 20:
• Found in 1 of 29 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kithara_52 (singleton),

Start 21:
• Found in 3 of 29 (10.3%) of genes in pham
• Manual Annotations of this start: 3 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Rizwana_60 (AP1), Tank_60 (AP1), Wilde_62 (AP1),

Start 22:
• Found in 2 of 29 (6.9%) of genes in pham
• Manual Annotations of this start: 2 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AWGoat_56 (AP4), SilentRX_58 (AP4),

Start 23:
• Found in 1 of 29 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 20
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BruhMoment_69 (AP3),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, FT, AP2, AP3, AP1, AP4, AP,

Info for manual annotations of cluster AP:
•Start number 17 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:
•Start number 21 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:
•Start number 1 was manually annotated 1 time for cluster AP2.
•Start number 17 was manually annotated 9 times for cluster AP2.

Info for manual annotations of cluster AP3:
•Start number 23 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:
•Start number 22 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster FT:
•Start number 18 was manually annotated 1 time for cluster FT.

Gene Information:

Gene: AWGoat_56 Start: 42055, Stop: 40922, Start Num: 22
Candidate Starts for AWGoat_56:
(Start: 22 @42055 has 2 MA's), (24, 42040), (27, 42025), (34, 41920), (36, 41887), (37, 41881), (41, 41821), (42, 41794), (44, 41752), (47, 41704), (48, 41701), (51, 41683), (52, 41677), (56, 41605), (59, 41581), (61, 41572), (63, 41506), (67, 41476), (70, 41434), (76, 41359), (81, 41326), (83, 41314), (109, 41008), (111, 40990), (113, 40933),

Gene: Beagle_80 Start: 47788, Stop: 46451, Start Num: 1
Candidate Starts for Beagle_80:
(Start: 1 @47788 has 1 MA's), (7, 47704), (Start: 17 @47623 has 10 MA's), (32, 47503), (33, 47455), (37, 47404), (44, 47275), (46, 47230), (47, 47227), (51, 47206), (55, 47152), (59, 47098), (68, 46978), (71, 46942), (74, 46900), (83, 46831), (87, 46801), (92, 46702), (95, 46666), (101, 46615), (106, 46558),

Gene: BetaFish_79 Start: 48352, Stop: 47180, Start Num: 17
Candidate Starts for BetaFish_79:
(Start: 1 @48517 has 1 MA's), (7, 48433), (Start: 17 @48352 has 10 MA's), (32, 48232), (33, 48184), (37, 48133), (44, 48004), (46, 47959), (47, 47956), (51, 47935), (55, 47881), (59, 47827), (68, 47707), (71, 47671), (74, 47629), (83, 47560), (87, 47530), (92, 47431), (95, 47395), (101, 47344), (106, 47287),

Gene: Boise_62 Start: 44645, Stop: 43632, Start Num: 18
Candidate Starts for Boise_62:
(Start: 18 @44645 has 1 MA's), (19, 44636), (26, 44585), (28, 44567), (29, 44564), (30, 44552), (31, 44549), (37, 44438), (38, 44408), (41, 44378), (44, 44309), (60, 44228), (71, 44078), (73, 44048), (83, 43967), (90, 43862), (94, 43805), (105, 43700), (106, 43694),

Gene: BruhMoment_69 Start: 46840, Stop: 45707, Start Num: 23
Candidate Starts for BruhMoment_69:
(2, 47047), (4, 47026), (5, 47020), (15, 46894), (Start: 23 @46840 has 1 MA's), (27, 46810), (31, 46777), (37, 46666), (42, 46579), (44, 46537), (56, 46390), (59, 46366), (61, 46357), (84, 46096), (103, 45844), (106, 45823), (107, 45811), (109, 45793), (110, 45784),

Gene: DogYard_79 Start: 47839, Stop: 46667, Start Num: 17
Candidate Starts for DogYard_79:
(Start: 1 @48004 has 1 MA's), (7, 47920), (Start: 17 @47839 has 10 MA's), (32, 47719), (33, 47671), (37, 47620), (44, 47491), (46, 47446), (47, 47443), (51, 47422), (55, 47368), (59, 47314), (71, 47158), (74, 47116), (83, 47047), (87, 47017), (92, 46918), (95, 46882), (101, 46831), (103, 46795), (106, 46774),

Gene: Forrestell_79 Start: 47078, Stop: 45906, Start Num: 17
Candidate Starts for Forrestell_79:
(Start: 17 @47078 has 10 MA's), (32, 46958), (33, 46910), (37, 46859), (44, 46730), (46, 46685), (47, 46682), (51, 46661), (55, 46607), (59, 46553), (71, 46397), (74, 46355), (83, 46286), (87, 46256), (92, 46157), (95, 46121), (101, 46070), (103, 46034), (106, 46013),

Gene: Hive_75 Start: 47619, Stop: 46447, Start Num: 17
Candidate Starts for Hive_75:
(Start: 1 @47784 has 1 MA's), (7, 47700), (Start: 17 @47619 has 10 MA's), (32, 47499), (33, 47451), (37, 47400), (44, 47271), (46, 47226), (47, 47223), (51, 47202), (55, 47148), (59, 47094), (68, 46974), (71, 46938), (74, 46896), (83, 46827), (87, 46797), (92, 46698), (95, 46662), (101, 46611), (106, 46554),

Gene: Kithara_52 Start: 42044, Stop: 40986, Start Num: 20
Candidate Starts for Kithara_52:
(12, 42083), (Start: 20 @42044 has 1 MA's), (34, 41906), (35, 41897), (49, 41693), (50, 41681), (62, 41582), (78, 41399), (79, 41396), (85, 41348), (87, 41324), (91, 41237), (99, 41150), (100, 41144),

Gene: Kubulix_79 Start: 47509, Stop: 46337, Start Num: 17
Candidate Starts for Kubulix_79:
(Start: 1 @47674 has 1 MA's), (7, 47590), (Start: 17 @47509 has 10 MA's), (32, 47389), (33, 47341), (37, 47290), (44, 47161), (46, 47116), (47, 47113), (51, 47092), (55, 47038), (59, 46984), (68, 46864), (71, 46828), (74, 46786), (83, 46717), (87, 46687), (92, 46588), (95, 46552), (101, 46501), (106, 46444),

Gene: MellowYellow_80 Start: 47751, Stop: 46579, Start Num: 17

Candidate Starts for MellowYellow_80:
(Start: 1 @47916 has 1 MA's), (7, 47832), (Start: 17 @47751 has 10 MA's), (32, 47631), (33, 47583), (37, 47532), (44, 47403), (46, 47358), (47, 47355), (51, 47334), (55, 47280), (59, 47226), (68, 47106), (71, 47070), (74, 47028), (83, 46959), (87, 46929), (92, 46830), (95, 46794), (101, 46743), (103, 46707), (106, 46686),

Gene: Nikan_77 Start: 47639, Stop: 46479, Start Num: 17
Candidate Starts for Nikan_77:
(8, 47699), (Start: 17 @47639 has 10 MA's), (33, 47471), (37, 47420), (41, 47360), (47, 47243), (48, 47240), (51, 47222), (52, 47216), (53, 47204), (58, 47123), (69, 46973), (70, 46970), (71, 46961), (74, 46919), (81, 46862), (87, 46820), (88, 46778), (89, 46754), (94, 46688), (95, 46685), (106, 46577),

Gene: NyleyClemson_79 Start: 47366, Stop: 46194, Start Num: 17
Candidate Starts for NyleyClemson_79:
(Start: 1 @47531 has 1 MA's), (7, 47447), (Start: 17 @47366 has 10 MA's), (32, 47246), (33, 47198), (37, 47147), (44, 47018), (46, 46973), (47, 46970), (51, 46949), (55, 46895), (59, 46841), (71, 46685), (74, 46643), (83, 46574), (87, 46544), (92, 46445), (95, 46409), (101, 46358), (103, 46322), (106, 46301),

Gene: Odyssey395_80 Start: 47860, Stop: 46688, Start Num: 17
Candidate Starts for Odyssey395_80:
(Start: 1 @48025 has 1 MA's), (7, 47941), (Start: 17 @47860 has 10 MA's), (32, 47740), (33, 47692), (37, 47641), (44, 47512), (46, 47467), (47, 47464), (51, 47443), (55, 47389), (59, 47335), (68, 47215), (71, 47179), (74, 47137), (83, 47068), (87, 47038), (92, 46939), (95, 46903), (101, 46852), (106, 46795),

Gene: Ollypop_74 Start: 47872, Stop: 46703, Start Num: 17
Candidate Starts for Ollypop_74:
(8, 47932), (Start: 17 @47872 has 10 MA's), (33, 47704), (37, 47653), (41, 47593), (44, 47524), (53, 47437), (58, 47356), (63, 47275), (69, 47206), (70, 47203), (71, 47194), (74, 47152), (81, 47095), (83, 47083), (87, 47053), (89, 46987), (94, 46921), (95, 46918), (106, 46810), (112, 46747),

Gene: PhuzzTulsa_77 Start: 48054, Stop: 46882, Start Num: 17
Candidate Starts for PhuzzTulsa_77:
(Start: 1 @48219 has 1 MA's), (7, 48135), (Start: 17 @48054 has 10 MA's), (32, 47934), (33, 47886), (37, 47835), (44, 47706), (46, 47661), (47, 47658), (51, 47637), (55, 47583), (59, 47529), (68, 47409), (71, 47373), (74, 47331), (83, 47262), (87, 47232), (92, 47133), (95, 47097), (101, 47046), (103, 47010), (106, 46989),

Gene: Pointis_76 Start: 47436, Stop: 46264, Start Num: 17
Candidate Starts for Pointis_76:
(Start: 1 @47601 has 1 MA's), (7, 47517), (Start: 17 @47436 has 10 MA's), (32, 47316), (33, 47268), (37, 47217), (44, 47088), (46, 47043), (47, 47040), (51, 47019), (55, 46965), (59, 46911), (68, 46791), (71, 46755), (74, 46713), (83, 46644), (87, 46614), (92, 46515), (95, 46479), (101, 46428), (106, 46371),

Gene: Popstraw_75 Start: 47598, Stop: 46426, Start Num: 17
Candidate Starts for Popstraw_75:
(Start: 1 @47763 has 1 MA's), (7, 47679), (Start: 17 @47598 has 10 MA's), (32, 47478), (33, 47430), (37, 47379), (44, 47250), (46, 47205), (47, 47202), (51, 47181), (55, 47127), (59, 47073), (68, 46953), (71, 46917), (74, 46875), (83, 46806), (87, 46776), (92, 46677), (95, 46641), (101, 46590), (106, 46533),

Gene: Pureglobe5_78 Start: 47880, Stop: 46708, Start Num: 17
Candidate Starts for Pureglobe5_78:
(Start: 1 @48045 has 1 MA's), (7, 47961), (Start: 17 @47880 has 10 MA's), (32, 47760), (33, 47712), (37, 47661), (44, 47532), (46, 47487), (47, 47484), (51, 47463), (55, 47409), (59, 47355), (68, 47235), (71, 47199), (74, 47157), (83, 47088), (87, 47058), (92, 46959), (95, 46923), (101, 46872), (106, 46815),

Gene: RIPWilbur_78 Start: 47400, Stop: 46228, Start Num: 17
Candidate Starts for RIPWilbur_78:
(Start: 1 @47565 has 1 MA's), (7, 47481), (Start: 17 @47400 has 10 MA's), (32, 47280), (33, 47232), (37, 47181), (44, 47052), (46, 47007), (47, 47004), (51, 46983), (55, 46929), (59, 46875), (68, 46755), (71, 46719), (74, 46677), (83, 46608), (87, 46578), (92, 46479), (95, 46443), (101, 46392), (103, 46356), (106, 46335),

Gene: Ranunculus_72 Start: 50033, Stop: 48846, Start Num: 17
Candidate Starts for Ranunculus_72:
(6, 50150), (11, 50063), (Start: 17 @50033 has 10 MA's), (33, 49850), (37, 49799), (41, 49739), (44, 49670), (48, 49619), (51, 49601), (53, 49583), (54, 49547), (59, 49496), (71, 49340), (83, 49229), (87, 49199), (94, 49067), (101, 49013), (106, 48956),

Gene: RazzB_79 Start: 47488, Stop: 46316, Start Num: 17
Candidate Starts for RazzB_79:
(Start: 17 @47488 has 10 MA's), (32, 47368), (33, 47320), (37, 47269), (44, 47140), (46, 47095), (47, 47092), (51, 47071), (55, 47017), (59, 46963), (71, 46807), (74, 46765), (83, 46696), (87, 46666), (92, 46567), (95, 46531), (101, 46480), (103, 46444), (106, 46423),

Gene: Ren19_73 Start: 47381, Stop: 46074, Start Num: 3
Candidate Starts for Ren19_73:
(3, 47381), (8, 47294), (Start: 17 @47234 has 10 MA's), (33, 47066), (37, 47015), (41, 46955), (47, 46838), (48, 46835), (52, 46811), (53, 46799), (58, 46718), (69, 46568), (70, 46565), (71, 46556), (74, 46514), (81, 46457), (87, 46415), (88, 46373), (89, 46349), (94, 46283), (95, 46280), (100, 46238), (106, 46172),

Gene: Rizwana_60 Start: 44233, Stop: 43166, Start Num: 21
Candidate Starts for Rizwana_60:
(Start: 21 @44233 has 3 MA's), (30, 44173), (32, 44158), (37, 44059), (40, 44023), (41, 43999), (43, 43963), (47, 43882), (57, 43807), (59, 43792), (66, 43696), (67, 43687), (71, 43636), (73, 43606), (75, 43588), (76, 43570), (81, 43537), (102, 43279), (106, 43249), (108, 43222),

Gene: RomansRevenge_63 Start: 44645, Stop: 43632, Start Num: 18
Candidate Starts for RomansRevenge_63:
(Start: 18 @44645 has 1 MA's), (19, 44636), (26, 44585), (28, 44567), (29, 44564), (30, 44552), (31, 44549), (37, 44438), (38, 44408), (41, 44378), (44, 44309), (60, 44228), (71, 44078), (73, 44048), (83, 43967), (90, 43862), (94, 43805), (105, 43700), (106, 43694),

Gene: SilentRX_58 Start: 43297, Stop: 42170, Start Num: 22
Candidate Starts for SilentRX_58:
(Start: 22 @43297 has 2 MA's), (27, 43267), (34, 43162), (36, 43129), (37, 43123), (42, 43036), (47, 42946), (51, 42925), (59, 42826), (61, 42817), (63, 42751), (67, 42721), (68, 42706), (76, 42604), (81, 42571), (83, 42559), (86, 42538), (94, 42397), (97, 42367), (107, 42271), (109, 42253), (111, 42235), (113, 42181),

Gene: Sunfish_60 Start: 40932, Stop: 39892, Start Num: 13

Candidate Starts for Sunfish_60:
(9, 40977), (10, 40974), (Start: 13 @40932 has 1 MA's), (25, 40860), (31, 40815), (39, 40668), (61, 40494), (64, 40425), (65, 40419), (71, 40347), (72, 40320), (77, 40278), (82, 40245), (93, 40089), (96, 40038),

Gene: Tank_60 Start: 44325, Stop: 43243, Start Num: 21
Candidate Starts for Tank_60:
(14, 44373), (16, 44367), (Start: 21 @44325 has 3 MA's), (30, 44265), (37, 44151), (40, 44115), (41, 44091), (43, 44055), (45, 43995), (67, 43779), (71, 43728), (73, 43698), (75, 43680), (80, 43638), (81, 43629), (90, 43512), (98, 43422), (103, 43362), (104, 43356), (106, 43341),

Gene: Wilde_62 Start: 44624, Stop: 43542, Start Num: 21
Candidate Starts for Wilde_62:
(14, 44672), (16, 44666), (Start: 21 @44624 has 3 MA's), (30, 44564), (37, 44450), (40, 44414), (41, 44390), (43, 44354), (45, 44294), (67, 44078), (71, 44027), (73, 43997), (75, 43979), (80, 43937), (81, 43928), (90, 43811), (98, 43721), (103, 43661), (104, 43655), (106, 43640),