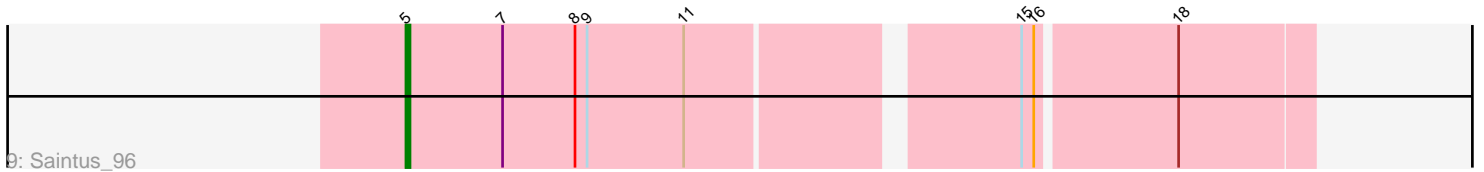
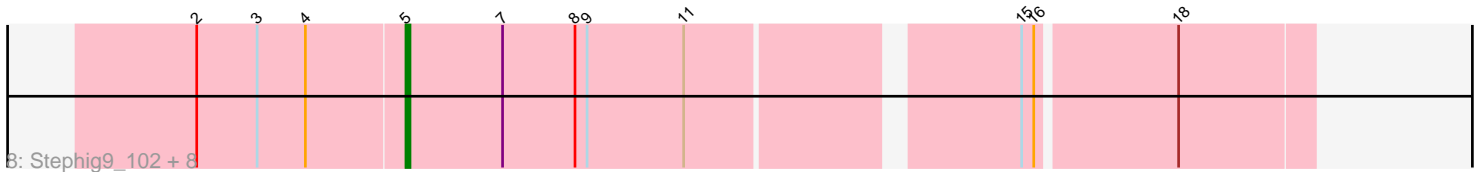
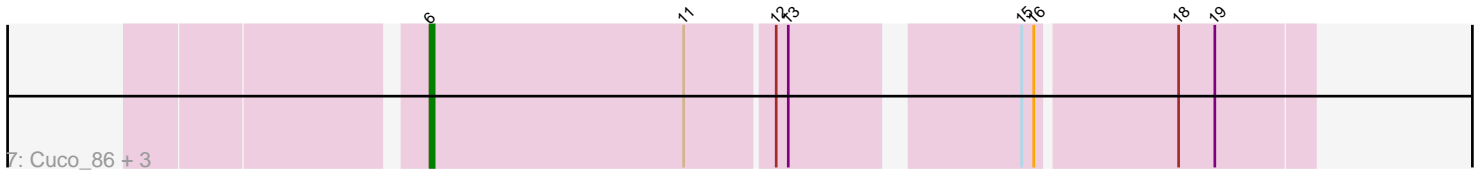
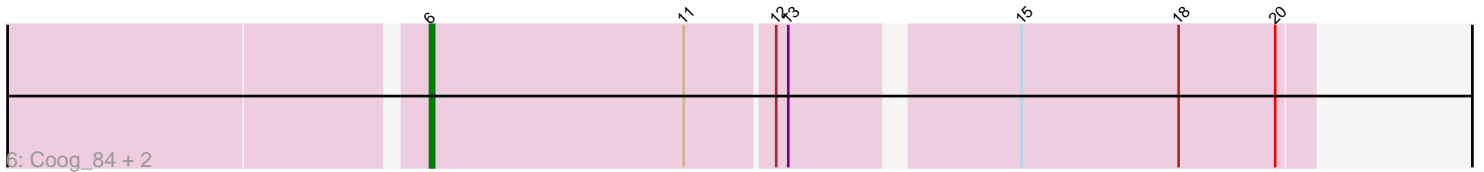
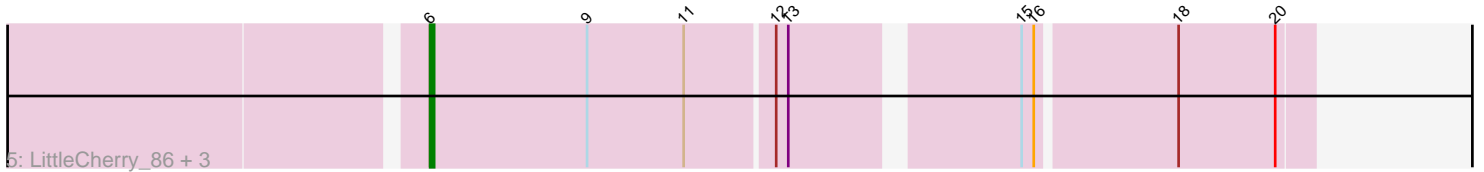
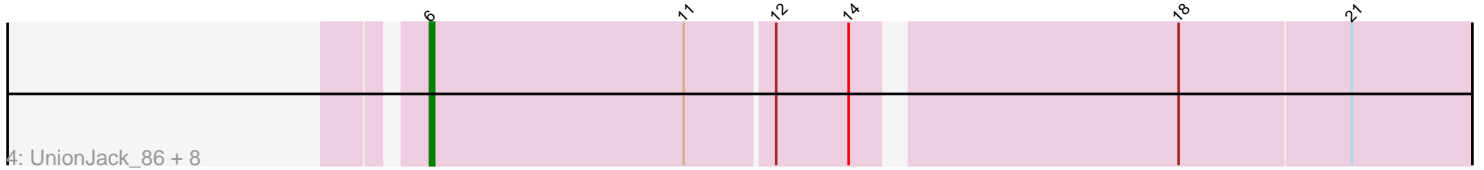
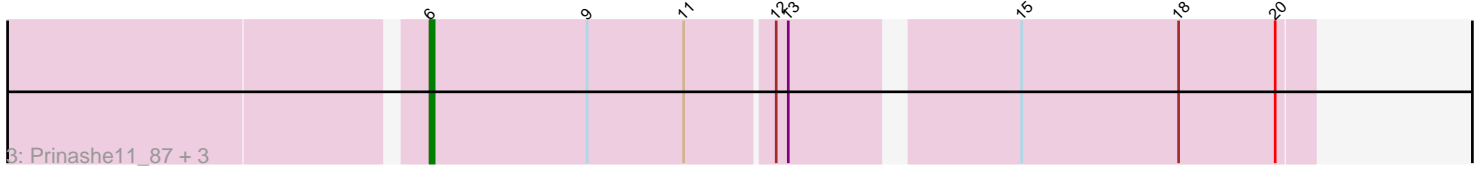
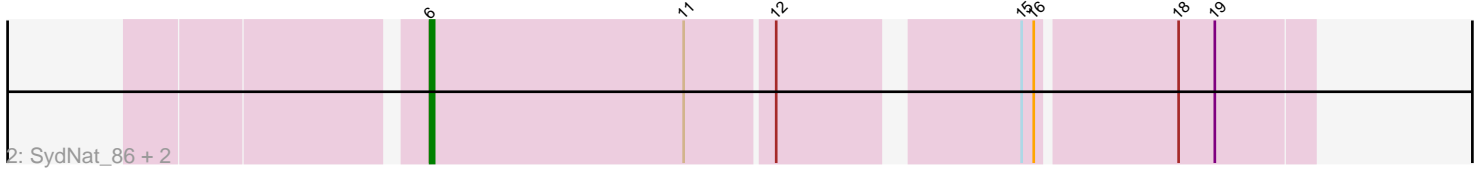
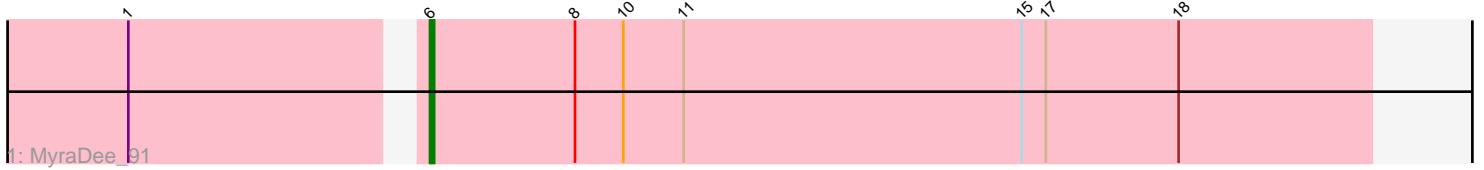


Pham 224730



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 224730 Report

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

Pham number 224730 has 38 members, 2 are drafts.

Phages represented in each track:

- Track 1 : MyraDee\_91
- Track 2 : SydNat\_86, Zolita\_85, Ghouboy\_86
- Track 3 : Prinashe11\_87, Bonamassa\_89, Swirley\_87, Twigg\_87
- Track 4 : UnionJack\_86, Chadwick\_89, EITiger69\_93, Jabiru\_87, Airmid\_90, Naca\_88, Scorpia\_86, Benedict\_91, PetterN\_94
- Track 5 : LittleCherry\_86, Milcery\_86, Tarynearal\_89, George\_83
- Track 6 : Coog\_84, Midas2\_84, HuhtaEnerson15\_85
- Track 7 : Cuco\_86, Theia\_87, MarysWell\_88, Dublin\_87
- Track 8 : Stephig9\_102, Smeadley\_101, Danforth\_100, Roary\_101, Groundhog\_96, Expelliarmus\_96, Astro\_100, Dixon\_100, NearlyHeadless\_102
- Track 9 : Saintus\_96

### ***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 26 of the 36 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Airmid\_90, Benedict\_91, Bonamassa\_89, Chadwick\_89, Coog\_84, Cuco\_86, Dublin\_87, EITiger69\_93, George\_83, Ghouboy\_86, HuhtaEnerson15\_85, Jabiru\_87, LittleCherry\_86, MarysWell\_88, Midas2\_84, Milcery\_86, MyraDee\_91, Naca\_88, PetterN\_94, Prinashe11\_87, Scorpia\_86, Swirley\_87, SydNat\_86, Tarynearal\_89, Theia\_87, Twigg\_87, UnionJack\_86, Zolita\_85,

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

- 

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

- Astro\_100, Danforth\_100, Dixon\_100, Expelliarmus\_96, Groundhog\_96, NearlyHeadless\_102, Roary\_101, Saintus\_96, Smeadley\_101, Stephig9\_102,

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

Start 5:

- Found in 10 of 38 ( 26.3% ) of genes in pham
- Manual Annotations of this start: 10 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Astro\_100 (A8), Danforth\_100 (A8), Dixon\_100 (A8), Expelliarmus\_96 (A8), Groundhog\_96 (A8), NearlyHeadless\_102 (A8), Roary\_101 (A8), Saintus\_96 (A8), Smeadley\_101 (A8), Stephig9\_102 (A8),

Start 6:

- Found in 28 of 38 ( 73.7% ) of genes in pham
- Manual Annotations of this start: 26 of 36
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Airmid\_90 (A5), Benedict\_91 (A5), Bonamassa\_89 (A5), Chadwick\_89 (A5), Coog\_84 (A5), Cuco\_86 (A5), Dublin\_87 (A5), EITiger69\_93 (A5), George\_83 (A5), Ghoulboy\_86 (A5), HuhtaEnerson15\_85 (A5), Jabiru\_87 (A5), LittleCherry\_86 (A5), MarysWell\_88 (A5), Midas2\_84 (A5), Milcery\_86 (A5), MyraDee\_91 (A18), Naca\_88 (A5), PetterN\_94 (A5), Prinashe11\_87 (A5), Scorpia\_86 (A5), Swirley\_87 (A5), SydNat\_86 (A5), Tarynearal\_89 (A5), Theia\_87 (A5), Twigg\_87 (A5), UnionJack\_86 (A5), Zolita\_85 (A5),

### Summary by clusters:

There are 3 clusters represented in this pham: A8, A5, A18,

Info for manual annotations of cluster A18:

- Start number 6 was manually annotated 1 time for cluster A18.

Info for manual annotations of cluster A5:

- Start number 6 was manually annotated 25 times for cluster A5.

Info for manual annotations of cluster A8:

- Start number 5 was manually annotated 10 times for cluster A8.

### Gene Information:

Gene: Airmid\_90 Start: 49856, Stop: 49605, Start Num: 6

Candidate Starts for Airmid\_90:

(Start: 6 @49856 has 26 MA's), (11, 49793), (12, 49772), (14, 49754), (18, 49679), (21, 49637),

Gene: Astro\_100 Start: 51065, Stop: 50853, Start Num: 5

Candidate Starts for Astro\_100:

(2, 51116), (3, 51101), (4, 51089), (Start: 5 @51065 has 10 MA's), (7, 51041), (8, 51023), (9, 51020), (11, 50996), (15, 50921), (16, 50918), (18, 50885),

Gene: Benedict\_91 Start: 49699, Stop: 49448, Start Num: 6

Candidate Starts for Benedict\_91:

(Start: 6 @49699 has 26 MA's), (11, 49636), (12, 49615), (14, 49597), (18, 49522), (21, 49480),

Gene: Bonamassa\_89 Start: 49586, Stop: 49377, Start Num: 6

Candidate Starts for Bonamassa\_89:

(Start: 6 @49586 has 26 MA's), (9, 49547), (11, 49523), (12, 49502), (13, 49499), (15, 49448), (18, 49409), (20, 49385),

Gene: Chadwick\_89 Start: 48037, Stop: 47786, Start Num: 6  
Candidate Starts for Chadwick\_89:  
(Start: 6 @48037 has 26 MA's), (11, 47974), (12, 47953), (14, 47935), (18, 47860), (21, 47818),

Gene: Coog\_84 Start: 49619, Stop: 49410, Start Num: 6  
Candidate Starts for Coog\_84:  
(Start: 6 @49619 has 26 MA's), (11, 49556), (12, 49535), (13, 49532), (15, 49481), (18, 49442), (20, 49418),

Gene: Cuco\_86 Start: 49369, Stop: 49163, Start Num: 6  
Candidate Starts for Cuco\_86:  
(Start: 6 @49369 has 26 MA's), (11, 49306), (12, 49285), (13, 49282), (15, 49231), (16, 49228), (18, 49195), (19, 49186),

Gene: Danforth\_100 Start: 51225, Stop: 51013, Start Num: 5  
Candidate Starts for Danforth\_100:  
(2, 51276), (3, 51261), (4, 51249), (Start: 5 @51225 has 10 MA's), (7, 51201), (8, 51183), (9, 51180), (11, 51156), (15, 51081), (16, 51078), (18, 51045),

Gene: Dixon\_100 Start: 50630, Stop: 50418, Start Num: 5  
Candidate Starts for Dixon\_100:  
(2, 50681), (3, 50666), (4, 50654), (Start: 5 @50630 has 10 MA's), (7, 50606), (8, 50588), (9, 50585), (11, 50561), (15, 50486), (16, 50483), (18, 50450),

Gene: Dublin\_87 Start: 48678, Stop: 48472, Start Num: 6  
Candidate Starts for Dublin\_87:  
(Start: 6 @48678 has 26 MA's), (11, 48615), (12, 48594), (13, 48591), (15, 48540), (16, 48537), (18, 48504), (19, 48495),

Gene: EITiger69\_93 Start: 50120, Stop: 49869, Start Num: 6  
Candidate Starts for EITiger69\_93:  
(Start: 6 @50120 has 26 MA's), (11, 50057), (12, 50036), (14, 50018), (18, 49943), (21, 49901),

Gene: Expelliarmus\_96 Start: 50844, Stop: 50632, Start Num: 5  
Candidate Starts for Expelliarmus\_96:  
(2, 50895), (3, 50880), (4, 50868), (Start: 5 @50844 has 10 MA's), (7, 50820), (8, 50802), (9, 50799), (11, 50775), (15, 50700), (16, 50697), (18, 50664),

Gene: George\_83 Start: 49989, Stop: 49783, Start Num: 6  
Candidate Starts for George\_83:  
(Start: 6 @49989 has 26 MA's), (9, 49950), (11, 49926), (12, 49905), (13, 49902), (15, 49851), (16, 49848), (18, 49815), (20, 49791),

Gene: Ghouboy\_86 Start: 49594, Stop: 49388, Start Num: 6  
Candidate Starts for Ghouboy\_86:  
(Start: 6 @49594 has 26 MA's), (11, 49531), (12, 49510), (15, 49456), (16, 49453), (18, 49420), (19, 49411),

Gene: Groundhog\_96 Start: 50900, Stop: 50688, Start Num: 5  
Candidate Starts for Groundhog\_96:  
(2, 50951), (3, 50936), (4, 50924), (Start: 5 @50900 has 10 MA's), (7, 50876), (8, 50858), (9, 50855), (11, 50831), (15, 50756), (16, 50753), (18, 50720),

Gene: HuhtaEnerson15\_85 Start: 49512, Stop: 49303, Start Num: 6  
Candidate Starts for HuhtaEnerson15\_85:  
(Start: 6 @49512 has 26 MA's), (11, 49449), (12, 49428), (13, 49425), (15, 49374), (18, 49335), (20, 49311),

Gene: Jabiru\_87 Start: 49146, Stop: 48898, Start Num: 6  
Candidate Starts for Jabiru\_87:  
(Start: 6 @49146 has 26 MA's), (11, 49083), (12, 49065), (14, 49047), (18, 48972), (21, 48930),

Gene: LittleCherry\_86 Start: 49099, Stop: 48893, Start Num: 6  
Candidate Starts for LittleCherry\_86:  
(Start: 6 @49099 has 26 MA's), (9, 49060), (11, 49036), (12, 49015), (13, 49012), (15, 48961), (16, 48958), (18, 48925), (20, 48901),

Gene: MarysWell\_88 Start: 49867, Stop: 49661, Start Num: 6  
Candidate Starts for MarysWell\_88:  
(Start: 6 @49867 has 26 MA's), (11, 49804), (12, 49783), (13, 49780), (15, 49729), (16, 49726), (18, 49693), (19, 49684),

Gene: Midas2\_84 Start: 49619, Stop: 49410, Start Num: 6  
Candidate Starts for Midas2\_84:  
(Start: 6 @49619 has 26 MA's), (11, 49556), (12, 49535), (13, 49532), (15, 49481), (18, 49442), (20, 49418),

Gene: Milcery\_86 Start: 49395, Stop: 49189, Start Num: 6  
Candidate Starts for Milcery\_86:  
(Start: 6 @49395 has 26 MA's), (9, 49356), (11, 49332), (12, 49311), (13, 49308), (15, 49257), (16, 49254), (18, 49221), (20, 49197),

Gene: MyraDee\_91 Start: 48649, Stop: 48416, Start Num: 6  
Candidate Starts for MyraDee\_91:  
(1, 48715), (Start: 6 @48649 has 26 MA's), (8, 48613), (10, 48601), (11, 48586), (15, 48502), (17, 48496), (18, 48463),

Gene: Naca\_88 Start: 50210, Stop: 49959, Start Num: 6  
Candidate Starts for Naca\_88:  
(Start: 6 @50210 has 26 MA's), (11, 50147), (12, 50126), (14, 50108), (18, 50033), (21, 49991),

Gene: NearlyHeadless\_102 Start: 50962, Stop: 50750, Start Num: 5  
Candidate Starts for NearlyHeadless\_102:  
(2, 51013), (3, 50998), (4, 50986), (Start: 5 @50962 has 10 MA's), (7, 50938), (8, 50920), (9, 50917), (11, 50893), (15, 50818), (16, 50815), (18, 50782),

Gene: PetterN\_94 Start: 49736, Stop: 49485, Start Num: 6  
Candidate Starts for PetterN\_94:  
(Start: 6 @49736 has 26 MA's), (11, 49673), (12, 49652), (14, 49634), (18, 49559), (21, 49517),

Gene: Prin Ashe11\_87 Start: 49665, Stop: 49456, Start Num: 6  
Candidate Starts for Prin Ashe11\_87:  
(Start: 6 @49665 has 26 MA's), (9, 49626), (11, 49602), (12, 49581), (13, 49578), (15, 49527), (18, 49488), (20, 49464),

Gene: Roary\_101 Start: 51099, Stop: 50887, Start Num: 5  
Candidate Starts for Roary\_101:  
(2, 51150), (3, 51135), (4, 51123), (Start: 5 @51099 has 10 MA's), (7, 51075), (8, 51057), (9, 51054),  
(11, 51030), (15, 50955), (16, 50952), (18, 50919),

Gene: Saintus\_96 Start: 47806, Stop: 47594, Start Num: 5  
Candidate Starts for Saintus\_96:  
(Start: 5 @47806 has 10 MA's), (7, 47782), (8, 47764), (9, 47761), (11, 47737), (15, 47662), (16,  
47659), (18, 47626),

Gene: Scorpia\_86 Start: 49308, Stop: 49057, Start Num: 6  
Candidate Starts for Scorpia\_86:  
(Start: 6 @49308 has 26 MA's), (11, 49245), (12, 49224), (14, 49206), (18, 49131), (21, 49089),

Gene: Smeadley\_101 Start: 50966, Stop: 50754, Start Num: 5  
Candidate Starts for Smeadley\_101:  
(2, 51017), (3, 51002), (4, 50990), (Start: 5 @50966 has 10 MA's), (7, 50942), (8, 50924), (9, 50921),  
(11, 50897), (15, 50822), (16, 50819), (18, 50786),

Gene: Stephig9\_102 Start: 51292, Stop: 51080, Start Num: 5  
Candidate Starts for Stephig9\_102:  
(2, 51343), (3, 51328), (4, 51316), (Start: 5 @51292 has 10 MA's), (7, 51268), (8, 51250), (9, 51247),  
(11, 51223), (15, 51148), (16, 51145), (18, 51112),

Gene: Swirley\_87 Start: 48120, Stop: 47911, Start Num: 6  
Candidate Starts for Swirley\_87:  
(Start: 6 @48120 has 26 MA's), (9, 48081), (11, 48057), (12, 48036), (13, 48033), (15, 47982), (18,  
47943), (20, 47919),

Gene: SydNat\_86 Start: 49603, Stop: 49397, Start Num: 6  
Candidate Starts for SydNat\_86:  
(Start: 6 @49603 has 26 MA's), (11, 49540), (12, 49519), (15, 49465), (16, 49462), (18, 49429), (19,  
49420),

Gene: Tarynearal\_89 Start: 49555, Stop: 49349, Start Num: 6  
Candidate Starts for Tarynearal\_89:  
(Start: 6 @49555 has 26 MA's), (9, 49516), (11, 49492), (12, 49471), (13, 49468), (15, 49417), (16,  
49414), (18, 49381), (20, 49357),

Gene: Theia\_87 Start: 49946, Stop: 49740, Start Num: 6  
Candidate Starts for Theia\_87:  
(Start: 6 @49946 has 26 MA's), (11, 49883), (12, 49862), (13, 49859), (15, 49808), (16, 49805), (18,  
49772), (19, 49763),

Gene: Twigg\_87 Start: 49524, Stop: 49315, Start Num: 6  
Candidate Starts for Twigg\_87:  
(Start: 6 @49524 has 26 MA's), (9, 49485), (11, 49461), (12, 49440), (13, 49437), (15, 49386), (18,  
49347), (20, 49323),

Gene: UnionJack\_86 Start: 47773, Stop: 47522, Start Num: 6  
Candidate Starts for UnionJack\_86:  
(Start: 6 @47773 has 26 MA's), (11, 47710), (12, 47689), (14, 47671), (18, 47596), (21, 47554),

Gene: Zolita\_85 Start: 49586, Stop: 49380, Start Num: 6

Candidate Starts for Zolita\_85:

(Start: 6 @49586 has 26 MA's), (11, 49523), (12, 49502), (15, 49448), (16, 49445), (18, 49412), (19, 49403),