**Supplementary material 1. Ant behaviour towards phasmid eggs; study sites and trial notes.**

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| Species Replicate Date Location Latitude Longitude | | | | | | Time | Weather | Colony Notes | Nest Notes | Egg Placement |
| *Iridomyrmex purpureus* | 1 | 26/03/19 | Elm Avenue, University of New England | 30°29’38’’S | 151°38’45’’E | 9:55am | Overcast, cool | Active, not a lot of interest in eggs | Large nest | 50cm from nest perimeter |
|  | 2 | 29/03/19 | St Marks Church, University of New England | 30°29’12’’S | 151°38’25’’E | 12:10pm | Sunny, warm | Very active | Small nest, a lot of individuals | 30cm from nest perimeter |
|  | 3 | 29/03/19 | Sport UNE | 30°29’30’’S | 151°38’30’’E | 12:30om | Sunny, warm | Active | Small nest | 30cm from nest perimeter |
|  | 4 | 01/04/19 | Sport UNE | 30°29’34’’S | 151°38’30’’E | 11:30am | Sunny, warm + windy | Very active | Small nest | 30cm from nest perimeter |
|  | 5 | 03/04/19 | University of New England | 30°29’37’’S | 151°38’34’’E | 10:00am | Sunny, cool + windy | Very active | Small nest | 30cm from nest perimeter |
|  | 6 | 04/04/19 | University of New England | 30°29’54’’S | 151°38’39’’E | 9:55am | Sunny, warm + windy | Active | Small nest | 30cm from nest perimeter |
|  | 7 | 04/04/19 | Rotary Park, Armidale | 30°31’9’’S | 151°38’48’’E | 12:15pm | Sunny, warm + windy | Very active | Large nest | 32cm from nest perimeter |
|  | 8 | 15/04/19 | University of New England | 30°29’33’’S | 151°38’33’’E | 9:12am | Cloudy, cool + windy | Active | Small nest | 30cm from nest perimeter |
|  | 9 | 16/04/19 | University of New England | 30°29’35’’S | 151°38’33’’E | 11:20am | Overcast, warm | Very active | Small nest | 30cm from nest perimeter |
|  | 10 | 16/04/19 | Sport UNE | 30°29’40’’S | 151°38’19’’E | 12:35pm | Partly cloudy, sunny + warm | Very active | Small, spread out nest | 34cm from nest perimeter |
| *Rhytidoponera metallica* | 1 | 26/03/19 | Elm Avenue, University of New England | 30°29’58’’S | 151°38’45’’E | 11:00am | Overcast, cool | Not very active | Small nest, <10 individuals foraging | 35cm from nest entrance |
|  | 2 | 01/04/19 | Sport UNE | 30°29’38’’S | 151°38’24’’E | 10:20am | Sunny, warm + windy | Active | Small nest, <20 individuals foraging | 30cm from nest entrance |
|  | 3 | 10/04/19 | Armidale Bicentennial Arboretum |  |  | 2:25pm | Sunny, warm | Not very active | Small nest, <15 individuals foraging | 32cm from nest entrance |
|  | 4 | 25/04/19 | University of New England | 30°29’37’’S | 151°38’34’’E | 11:30am | Warm, partly cloudy + slight winds | Not very active | Small nest, <10 individuals foraging | 33cm from nest entrance |
|  | 5 | 27/054/19 | University of New England | 30°29’60’’S | 151°38’43’’E | 10:13am | Sunny, warm | Not very active | Small nest, <5 individuals foraging | 30cm from nest entrance |
|  | 6 | 28/04/19 | Sport UNE | 30°29’38’’S | 151°38’43’’E | 10:52am | Sunny, warm + slight winds | Not very active | Small nest <5 individuals foraging | 30cm from nest entrance |
|  | 7 | 29/04/19 | Sport UNE | 30°30’0’’S | 151°38’24’’E | 9:52am | Sunny, warm + slight winds | Not very active | Small nest, <10 individuals foraging | 30cm from nest entrance |
|  | 8 | 15/05/19 | University of New England | 30°29’30’’S | 151°38’18’’E | 11:39am | Sunny, warm + partly cloudy | Not very active | Small nest, <10 individuals foraging | 30cm from nest entrance |
|  | 9 | 14/10/19 | University of New England | 30°29’39’’S | 151°38’32’’E | 10:39am | Sunny, warm + slightly windy | Very active nest- a lot of interest in eggs | Large nest, >30 individuals foraging | 30cm from nest entrance |
|  | 10 | 15/10/19 | Sport UNE | 30°29’39’’S | 151°38’24’’E | 9:13am | Sunny, warm | Very active, a lot of interest in eggs | Large nest, >30 individuals | 30cm from nest entrance |
| *Camponotus aeneopilosus* | 1 | 11/04/19 | Armidale Bicentennial Arboretum | 30°31’21’’S | 151°38’49’’E | 3:30pm | Hot, Sunny | Very active, not interested in eggs | Large nest, >100 individuals foraging | 32cm from nest |
|  | 2 | 14/05/19 | Sport UNE | 30°29’30’’S | 151°38’18’’E | 12:18pm | Partly cloudy, slight wind | Active | Small nest, <20 individuals | 2=30cm from nest |
|  | 3 | 14/10/19 | Armidale Bicentennial Arboretum | 30°31’12’’S | 151°39’11’’E | 1:25pm | Sunny, warm + windy | Not very active, mainly collecting materials near nest | Small nest, <10 individuals foraging | 30cm from nest entrance |
|  | 4 | 24/03/19 | Dorothy Avenue, Armidale | 30°31’35’’S | 151°39’8’’E | 9:55am | Hot, sunny | Not very active, mainly staying in or around nest | Small nest, <10 individuals foraging | 56cm from nest entrance |
|  | 5 | 21/10/19 | Armidale Bicentennial Arboretum | 30°31’18’’S | 151°38’59’’E | 10:06am | Sunny, warm | Very active nest, not interested in eggs | Large nest, >50 individuals foraging | 30cm from nest entrance |
|  | 6 | 22/10/19 | Armidale Bicentennial Arboretum | 30°31’22’’S | 151°39’4’’E | 10:25am | Sunny, warm | Very active nest- interested in eggs | Shaded nest, large, >30 individuals foraging | 30cm from nest entrance |
|  | 7 | 23/10/19 | Sport UNE | 30°29’45’’S | 151°38’30’’E | 1:00pm | Sunny, warm | Very active | Small nest, <30 individuals | 30cm from nest entrance |
|  | 8 | 25/10/19 | Armidale Bicentennial Arboretum | 30°31’13’’S | 151°38’50’’E | 2:30pm | Hot, sunny | Not very active- not very interested in eggs | Shaded nest, small, <10 individuals | 30cm from nest entrance |
|  | 9 | 26/10/19 | Armidale Bicentennial Arboretum | 30°31’12’’S | 151°38’50’’E | 11:00am | Sunny, warm + windy | Very active-not very interested in eggs | Large nest, >30 individuals foraging | 30cm from nest entrance |
|  | 10 | 26/10/19 | Armidale Bicentennial Arboretum | 30°31’16’’S | 151°38’55’’E | 12:05pm | Sunny, warm + very windy | Not very active-not interested in eggs | Small nest, <10 individuals | 30cm from nest entrance |
| *Iridomyrmex rufoniger* | 1 | 17/04/19 | University of New England | 30°29’58’’S | 151°38’42’’E | 11:11am | Cool, windy + overcast | Not very active- no interest in eggs | Small nest <15 individuals foraging | 30cm from nest entrance at base of tree |
|  | 2 | 21/04/19 | University of New England | 30°29’36’’S | 151°38’35’’E | 11:25am | Sunny, slight winds | Very active-interested in eggs | Large nest, >100 individuals foraging | 30cm from nest entrance |
|  | 3 | 20/04/19 | University of New England | 30°29’36’’S | 151°38’33’’E | 10:50am | Sunny, light winds | Active- some interest in eggs | Small nest, <50 individuals foraging | 30cm from nest entrance |
|  | 4 | 20/04/19 | University of New England | 30°29’35’’S | 151°38’32’’E | 11:55am | Sunny, light winds | Active- some interest in eggs | Small nest, <50 individuals foraging | 30cm from nest entrance |
|  | 5 | 20/04/19 | University of New England | 30°29’35’’S | 151°38’33’’E | 11:55am | Sunny, light winds | Active- some interest in eggs | Small nest, 50-100 individuals foraging | 30cm from nest entrance |
|  | 6 | 22/04/19 | University of New England | 30°29’37’’S | 151°38’32’’E | 11:28am | Warm, overcast | Active, some interest in eggs | Small nest, 50-100 individuals foraging | 30cm from nest entrance |
|  | 7 | 22/04/19 | University of New England | 30°29’37’’S | 151°38’30’’E | 11:30am | Warm, overcast | Very active-interested in eggs | Large nest, >100 individuals foraging | 30cm from nest entrance |
|  | 8 | 23/04/19 | Armidale Bicentennial Arboretum | 30°31’35’’S | 151°39’7’’E | 10:40am | Cool, overcast + windy | Not very active- no interest in eggs | Small nest, <30 individuals foraging | 30cm from nest entrance |
|  | 9 | 24/04/19 | Sport UNE | 30°29’39’’S | 151°38’23’’E | 11:10am | Sunny, warm + slight winds | Not very active- no interest in eggs | Small nest, <30 individuals foraging | 30cm from nest entrance |
| *Myrmecia tarsata* | 1 | 03/04/19 | UNE Mountain Bike Track | 30°29’26’’S | 151°38’15’’E | 11:40am | Sunny, warm | Not very active-not interested in eggs | Large nest, only 2-3 individuals foraging, others near nest opening | 30cm from nest entrance |
|  | 2 | 25/08/19 | Sport UNE | 30°29’28’’S | 151°38’23’’E | 9:31am | Hot, sunny, slight wind | Not very active- mainly staying in nest | Small nest, only 1 individual foraging | 30cm from nest entrance |
|  | 3 | 25/10/19 | Armidale Bicentennial Arboretum | 30°31’12’’S | 151°38’50’’E | 11:35am | Hot, sunny, slight wind | Active-some interest in eggs | Large nest, >5 individuals foraging | 30cm from nest entrance |
|  | 4 | 25/10/19 | Armidale Bicentennial Arboretum | 30°31’18’’S | 151°38’49’’E | 12:45pm | Warm, sunny + windy | Not very active-no interest in eggs | Shaded nest, small, only 2-3 individuals foraging | 30cm from nest entrance |
|  | 5 | 25/10/19 | Armidale Bicentennial Arboretum | 30°31’18’’S | 151°38’59’’E | 1:50 | Warm, sunny | Not very active-no interest in eggs | Small nest, only 3-4 individuals foraging | 30cm from nest |
|  | 6 | 12/11/19 | Armidale Bicentennial Arboretum | 30°31’23’’S | 151°39’5’’E | 8:00am | Warm, sunny, windy | Very Active-some interest in eggs | Large nest- 5-10 individuals foraging | 30cm from nest |
|  | 7 | 12/11/19 | Armidale Bicentennial Arboretum | 30°31’10’’S | 151°38’52’’E | 9:05am | Warm, sunny, windy | Very Active- no interest in eggs | Small nest- 3-4 individuals foraging | 30cm from nest |
|  | 8 | 12/11/19 | MTB Track, Sport UNE | 30°29’28’’S | 151°38’18’’E | 10:45am | Warm, sunny, windy | Not very Active- no interest in eggs | Small nest- 2 individuals foraging | 30cm from nest |

**Supplementary material 2. Seed removal trial: study sites and trial notes.**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Species Replicate Date Location Latitude Longitude | | | | | | Time | Weather | Colony Notes | Nest Notes | Seed Placement |
| *Iridomyrmex purpureus* | 1 | 10/10/19 | University of New England | 30°29’33’’S | 151°38’33’’E | 10:20am | Sunny, warm | Very active | Small nest | 30cm from nest perimeter |
|  | 2 | 10/10/19 | Rotary Park, Armidale | 30°31’9’’S | 151°38’48’’E | 12:00pm | Warm, overcast, windy | Very active | Large nest | 30cm from nest perimeter |
|  | 3 | 14/10/19 | University of New England | 30°29’34’’S | 151°38’34’’E | 9:16am | Hot, sunny | Very active | Small nest | 30cm from nest perimeter |
|  | 4 | 14/10/19 | Sport UNE | 30°29’39’’S | 151°38’35’’E | 10:23am | Hot, sunny | Very active | Small nest | 30cm from nest perimeter |
|  | 5 | 15/10/19 | Sport UNE | 30°29’34’’S | 151°38’30’’E | 10:24am | Sunny, warm | Active | Small nest | 30cm from nest perimeter |
|  | 6 | 17/10/19 | University of New England | 30°29’33’’E | 151°38’29’’E | 10:35am | Very windy, warm | Very active | Spread out nest | 30cm from nest perimeter |
|  | 7 | 17/10/19 | University of New England | 30°29’39’’S | 151°38’31’’E | 11:40am | Very windy, warm | Very active | Large, shaded nest | 30cm from nest perimeter |
|  | 8 | 19/10/19 | Sport UNE | 30°29’41’’S | 151°38’25’’E | 11:02am | Warm, sunny, slight wind | Active | Small, spread out nest | 30cm from nest perimeter |
| *Rhytidoponera metallica* | 1 | 16/10/19 | Sport UNE | 30°29’38’’S | 151°38’24’’E | 11:00am | Hot, sunny, windy | Not very active | Small nest, <10 individuals foraging | 30cm from nest entrance |
|  | 2 | 18/10/19 | University of New England | 30°29’55’’S | 151°38’35’’E | 10:05am | Sunny, warm | Very active | >30 individuals foraging | 30cm from nest entrance |
|  | 3 | 18/10/19 | University of New England | 30°29’37’’S | 151°38’31’’E | 10:27am | Sunny, warm | Active | <30 individuals foraging | 30cm from nest entrance |
|  | 4 | 18/10/19 | University of New England | 30°29’37’’S | 151°38’33’’E | 11:39am | Sunny, warm | Active | Smaller nest, <30 individuals foraging | 30cm from nest entrance |
|  | 5 | 18/10/19 | University of New England | 30°29’37’’S | 151°38’32’’E | 12:03am | Sunny, warm | Not very active-mainly staying in nest | Small nest, <5 individuals foraging | 30cm from nest entrance |
|  | 6 | 19/10/19 | Trevenna Rd, UNE | 30°29’11’’S | 151°38’22’’E | 9:25am | Sunny, warm | Very active | Large nest, >50 individuals foraging | 30cm from nest entrance |
|  | 7 | 19/10/19 | Trevenna Rd, UNE | 30°29’5’’S | 151° 38’23’’E | 10:29am | Sunny, warm | Very active | Small nest, >30 individuals foraging | 30cm from nest entrance |
|  | 8 | 21/10/19 | Armidale Bicentennial Arboretum | 30°31’17’’S | 151°38’50’’E | 11:24am | Sunny, warm | Not very active, mainly staying in nest | Small nest, <10 individuals foraging | 30cm from nest entrance |
| *Camponotus aeneopilosus* | 1 | 21/10/19 | Armidale Bicentennial Arboretum | 30°31’18’’S | 151°38’59’’E | 9:03am | Sunny, warm | Very active, no interest in seeds | Large nest, >50 individuals foraging | 30cm from nest entrance |
|  | 2 | 22/10/19 | Armidale Bicentennial Arboretum | 30°31’20’’S | 151°39’3’’E | 9:05am | Sunny, warm | Active, no interest in seeds | Small nest, <20 individuals foraging | 30cm from nest entrance |
|  | 3 | 22/10/19 | Armidale Bicentennial Arboretum | 30°31’21’’S | 151°39’4’’E | 9:10am | Warm | Very active-interested in seeds | Shaded, large nest, >50 individuals foraging | 30cm from nest entrance |
|  | 4 | 23/10/19 | Armidale Bicentennial Arboretum | 30°31’16’’S | 151°38’55’’E | 12:00pm | Sunny, warm | Very active, some interest in seeds | Small nest, <30 individuals foraging | 30cm from nest entrance |
|  | 5 | 24/10/19 | Armidale Bicentennial Arboretum | 30°31’12’’S | 151°38’50’’E | 9:10am | Sunny, cool | Active-some interest in seeds | Small nest, <30 individuals foraging | 30cm from nest entrance |
|  | 6 | 24/10/19 | Armidale Bicentennial Arboretum | 30°31’13’’S | 151°38’50’’E | 9:18am | Cool, cloudy | Not very active, no interest in seeds | Shaded, small nest, <30 individuals foraging | 30cm from nest entrance |
|  | 7 | 24/10/19 | Sport UNE | 30°29’45’’S | 151°38’30’’E | 10:10am | Sunny, cool, windy | Not very active, mainly removing debris from nest | Small nest, <20 individuals foraging | 30cm from nest entrance |
|  | 8 | 26/10/19 | Dorothy Ave, Armidale | 30°31’35’’S | 151°39’8’’E | 2:00pm | Sunny, warm, very windy | Not very active, no interest in seeds | Shaded, small nest, <10 individuals foraging | 30cm from nest entrance |
| *Iridomyrmex rufoniger* | 1 | 19/10/19 | Sport UNE | 30°29’39’’S | 151°38’23’’E | 11:48am | Sunny, warm | Very active, interested in seeds | Large nest, >50 individuals | 30cm from nest entrance |
|  | 2 | 21/10/19 | Armidale Bicentennial Arboretum | 30°31’17’’S | 151°38’46’’E | 12:30pm | Sunny, warm | Very active, no interest in seeds | Large nest, >50 individuals | 30cm from nest entrance |
|  | 3 | 22/10/19 | Armidale Bicentennial Arboretum | 30°31’25’’S | 151°39’7’’E | 11:27am | Sunny, warm | Very active, no interest in seeds | Small nest, <50 individuals foraging | 30cm from nest entrance |
|  | 4 | 22/10/19 | Armidale Bicentennial Arboretum | 30°31’23’’S | 151°39’5’’E | 11:31am | Sunny, warm | Very active, some interest in seeds | Small nest, <50 individuals foraging | 30cm from nest entrance |
|  | 5 | 23/10/19 | Sport UNE | 30°29’27’’S | 151°38’27’’E | 9:08am | Sunny, warm | Very active, some interest in seeds | Small nest, <30 individuals foraging | 30cm from nest entrance |
|  | 6 | 23/10/19 | University of New England | 30°29’34’’S | 151°38’28’’E | 10:12am | Sunny, warm | Active, no interest in seeds | Shaded nest, <30 individuals | 30cm from nest entrance |
|  | 7 | 23/10/19 | University of New England | 30°29’36’’S | 151°38’33’’E | 10:16am | Sunny, warm | Very active, no interest in seeds | Shaded nest, <50 individuals foraging | 30cm from nest entrance |
|  | 8 | 23/10/19 | University of New England | 30°29’35’’S | 151°38’32’’E | 10:19am | Sunny, warm | Very active, some interest in seeds | Large nest, >50 individuals | 30cm from nest entrance |
| *Myrmecia tarsata* | 1 | 23/10/19 | Sport UNE | 30°29’27’’S | 151°28’25’’E | 9:02am | Sunny, warm | Very active, a lot of interest in seeds | Large nest, >15 individuals foraging | 30cm from nest entrance |
|  | 2 | 24/10/19 | Armidale Bicentennial Arboretum | 30°31’14’’S | 151°38’48’’E | 9:01am | Cool, slight winds | Not very active, no interest in seeds | Shaded nest, 2 individuals foraging | 30cm from nest entrance |
|  | 3 | 24/10/19 | Armidale Bicentennial Arboretum | 30°31’12’’S | 151°38’50’’E | 10:04am | Sunny, cool | Very active, no interest in seeds | Large, shaded nest, 5-10 individuals foraging | 30cm from nest entrance |
|  | 4 | 24/10/19 | Armidale Bicentennial Arboretum | 30°31’18’’S | 151°38’49’’E | 11:10am | Sunny, cool | Not very active, no interest in seeds | Shaded nest, small nest, 2-3 individuals foraging | 30cm from nest entrance |
|  | 5 | 26/10/19 | Armidale Bicentennial Arboretum | 30°31’16’’S | 151°38’57’’E | 9:00am | Sunny, very windy | Not very active, no interest in needs | Shaded nest, small, 3-4 individuals foraging | 30cm from nest entrance |
|  | 6 | 13/11/19 | Armidale Bicentennial Arboretum | 30°31’23’’S | 151°39’5’’E | 8:00am | Sunny, warm, windy | Active- some interest in seeds | Large nest, 5-8 individuals foraging | 30cm from nest entrance |
|  | 7 | 14/11/19 | Armidale Bicentennial Arboretum | 30°31’10’’S | 151°38’52’’E | 8:00am | Sunny, warm | Active- no interest in seeds | Small nest, 3-4 individuals foraging | 30cm from nest entrance |
|  | 8 | 14/11/19 | MTB Track, Sport UNE | 30°29’28’’S | 151°38’18’’E | 11:05am | Sunny, warm | Not very active- no interest in seeds | Small nest, 2-3 individuals foraging | 30cm from nest entrance |