

**Table 1.** Mean Weber's length (WL), relative eye length (RelEL), relative scape length (RelSL), relative mandible length (RelML) and relative hindleg length (RelHL) of species/morphospecies in Lijiang.

| <b>Species/morphospecies</b>    | <b>WL</b> | <b>RelEL</b> | <b>RelSL</b> | <b>RelML</b> | <b>RelHL</b> |
|---------------------------------|-----------|--------------|--------------|--------------|--------------|
| <i>Myrmica pleiorhytida</i>     | 1.97      | 0.13         | 0.65         | 0.40         | 1.38         |
| <i>Temnothorax cf. striatus</i> | 0.84      | 0.17         | 0.69         | 0.39         | 1.19         |
| <i>Temnothorax wui</i>          | 0.91      | 0.19         | 0.61         | 0.37         | 1.18         |

**Table 2.** Mean Weber's length (WL), relative eye length (ReLEL), relative scape length (ReLSL), relative mandible length (ReMLL) and relative hindleg length (ReHL) of species/morphospecies in Ailaoshan with eye length >0.

| <b>Species/morphospecies</b>              | <b>WL</b> | <b>ReLEL</b> | <b>ReLSL</b> | <b>ReMLL</b> | <b>ReHL</b> |
|-------------------------------------------|-----------|--------------|--------------|--------------|-------------|
| <i>Amblyopone amblyops</i>                | 1.02      | 0.03         | 0.43         | 0.57         | 0.98        |
| <i>Amblyopone awa</i>                     | 1.48      | 0.04         | 0.39         | 0.54         | 0.96        |
| <i>Amblyopone octodentata</i>             | 1.23      | 0.03         | 0.40         | 0.54         | 0.90        |
| <i>Amblyopone triloba</i>                 | 1.48      | 0.03         | 0.46         | 0.58         | 0.93        |
| <i>Brachyponera luteipes</i> B            | 1.54      | 0.11         | 0.68         | 0.38         | 1.37        |
| <i>Camponotus</i> sp. A                   | 1.65      | 0.21         | 0.70         | 0.33         | 1.61        |
| <i>Camponotus</i> sp. B                   | 2.55      | 0.21         | 0.71         | 0.25         | 1.57        |
| <i>Carebara obtusidenta</i>               | 0.43      | 0.05         | 0.62         | 0.48         | 1.08        |
| <i>Cerapachys biroi</i>                   | 0.72      | 0.04         | 0.36         | 0.25         | 0.89        |
| <i>Cerapachys sulcinodis</i>              | 1.56      | 0.10         | 0.44         | 0.34         | 1.13        |
| <i>Crematogaster inflata</i>              | 1.02      | 0.18         | 0.63         | 0.53         | 1.41        |
| <i>Ectomomyrmex javana</i>                | 3.00      | 0.08         | 0.58         | 0.44         | 1.21        |
| <i>Gaoligongidris planodorsa</i>          | 0.83      | 0.11         | 0.53         | 0.48         | 1.13        |
| <i>Gnamptogenys coccina</i>               | 1.68      | 0.07         | 0.58         | 0.38         | 1.16        |
| <i>Hypoponera nippona</i>                 | 0.89      | 0.03         | 0.55         | 0.38         | 1.04        |
| <i>Hypoponera truncata</i>                | 1.11      | 0.05         | 0.57         | 0.38         | 1.11        |
| <i>Lasius draco</i>                       | 1.73      | 0.13         | 0.74         | 0.44         | 1.71        |
| <i>Monomorium gracillimum</i>             | 0.52      | 0.02         | 0.63         | 0.46         | 1.13        |
| <i>Monomorium pharaonis</i>               | 0.72      | 0.14         | 0.72         | 0.36         | 1.33        |
| <i>Myrmecina guangxiensis</i>             | 0.88      | 0.08         | 0.65         | 0.45         | 1.13        |
| <i>Myrmecina striata</i>                  | 0.89      | 0.08         | 0.68         | 0.46         | 1.14        |
| <i>Myrmica margaritae</i>                 | 1.58      | 0.14         | 0.73         | 0.41         | 1.43        |
| <i>Myrmica ritae</i>                      | 1.69      | 0.14         | 0.77         | 0.37         | 1.50        |
| <i>Myrmica</i> sp. A                      | 1.78      | 0.14         | 0.79         | 0.38         | 1.54        |
| <i>Myrmica</i> sp. C                      | 2.63      | 0.13         | 0.68         | 0.39         | 1.68        |
| <i>Myrmica titanica</i>                   | 2.89      | 0.12         | 0.73         | 0.38         | 1.71        |
| <i>Nylanderia</i> sp. B                   | 0.84      | 0.19         | 0.90         | 0.41         | 1.71        |
| <i>Nylanderia vividula</i>                | 0.78      | 0.15         | 0.91         | 0.41         | 1.64        |
| <i>Nylanderia yerburyi</i>                | 0.73      | 0.19         | 0.89         | 0.37         | 1.71        |
| <i>Perissomyrmex fissus</i>               | 0.97      | 0.10         | 0.81         | 0.52         | 1.58        |
| <i>Pheidole indosinensis</i>              | 0.85      | 0.14         | 0.81         | 0.48         | 1.49        |
| <i>Pheidole magna</i>                     | 1.15      | 0.13         | 0.83         | 0.50         | 1.79        |
| <i>Ponera</i> cf. <i>pianmana</i>         | 1.16      | 0.02         | 0.55         | 0.37         | 0.97        |
| <i>Ponera menglana</i>                    | 1.14      | 0.04         | 0.55         | 0.39         | 1.00        |
| <i>Ponera pianmana</i>                    | 0.77      | 0.03         | 0.52         | 0.39         | 0.91        |
| <i>Prenolepis</i> sp. A                   | 1.17      | 0.18         | 0.91         | 0.42         | 1.95        |
| <i>Proceratium longigaster</i>            | 0.98      | 0.02         | 0.55         | 0.41         | 1.09        |
| <i>Stenamma jeriorum</i>                  | 0.92      | 0.13         | 0.55         | 0.42         | 1.12        |
| <i>Stigmatomma meiliana</i>               | 1.60      | 0.03         | 0.43         | 0.53         | 1.00        |
| <i>Strumigenys</i> cf. <i>phasma</i>      | 0.51      | 0.02         | 0.47         | 0.24         | 1.08        |
| <i>Strumigenys paraposta</i>              | 0.91      | 0.07         | 0.49         | 0.43         | 1.16        |
| <i>Tapinoma geei</i>                      | 0.96      | 0.17         | 0.71         | 0.29         | 1.48        |
| <i>Temnothorax</i> cf. <i>brevispinus</i> | 0.68      | 0.19         | 0.67         | 0.38         | 1.24        |
| <i>Temnothorax</i> cf. <i>maorensis</i>   | 0.83      | 0.18         | 0.66         | 0.33         | 1.28        |
| <i>Temnothorax</i> cf. <i>pisarskii</i>   | 0.84      | 0.17         | 0.67         | 0.38         | 1.26        |
| <i>Temnothorax</i> cf. <i>ruginosus</i>   | 0.78      | 0.16         | 0.72         | 0.40         | 1.25        |
| <i>Temnothorax</i> cf. <i>striatus</i>    | 0.60      | 0.19         | 0.72         | 0.41         | 1.21        |
| <i>Temnothorax hengshanensis</i>          | 1.00      | 0.16         | 0.66         | 0.40         | 1.34        |
| <i>Temnothorax orchidus</i>               | 0.94      | 0.17         | 0.60         | 0.38         | 1.23        |
| <i>Temnothorax</i> sp.                    | 0.58      | 0.19         | 0.76         | 0.41         | 1.21        |
| <i>Tetramorium aptum</i>                  | 0.88      | 0.16         | 0.57         | 0.45         | 1.18        |

|                               |      |      |      |      |      |
|-------------------------------|------|------|------|------|------|
| <i>Tetramorium khnum</i>      | 0.86 | 0.16 | 0.58 | 0.49 | 1.21 |
| <i>Vollenhovia cf. emeryi</i> | 1.02 | 0.14 | 0.47 | 0.35 | 0.96 |

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**Table 3.** Mean Weber's length (WL), relative eye length (RelEL), relative scape length (RelSL), relative mandible length (RelML) and relative hindleg length (RelHL) of species/morphospecies in Mengla with eye length > 0.

| <b>Species/morphospecies</b>     | <b>WL</b> | <b>RelEL</b> | <b>RelSL</b> | <b>RelML</b> | <b>RelHL</b> |
|----------------------------------|-----------|--------------|--------------|--------------|--------------|
| <i>Acropyga yaeyamensis</i>      | 0.98      | 0.12         | 0.81         | 0.49         | 1.72         |
| <i>Amblyopone awa</i>            | 1.10      | 0.04         | 0.40         | 0.45         | 0.87         |
| <i>Amblyopone crenata</i>        | 2.00      | 0.05         | 0.44         | 0.55         | 1.11         |
| <i>Anochetus cf. subcoecus</i>   | 1.53      | 0.07         | 0.59         | 0.43         | 1.28         |
| <i>Anochetus subcoecus</i>       | 1.21      | 0.06         | 0.63         | 0.47         | 1.22         |
| <i>Aphaenogaster beccarii</i>    | 1.84      | 0.12         | 0.98         | 0.34         | 2.09         |
| <i>Aphaenogaster exasperata</i>  | 2.50      | 0.12         | 0.81         | 0.33         | 1.97         |
| <i>Aphaenogaster feae</i>        | 2.02      | 0.13         | 0.93         | 0.35         | 2.12         |
| <i>Aphaenogaster lepida</i>      | 2.00      | 0.12         | 0.82         | 0.35         | 1.88         |
| <i>Aphaenogaster schurri</i>     | 2.13      | 0.14         | 0.91         | 0.37         | 2.05         |
| <i>Brachyponera luteipes C</i>   | 1.37      | 0.10         | 0.64         | 0.40         | 1.30         |
| <i>Brachyponera luteipes D</i>   | 1.82      | 0.11         | 0.66         | 0.37         | 1.40         |
| <i>Brachyponera luteipes I</i>   | 1.61      | 0.08         | 0.66         | 0.34         | 1.35         |
| <i>Brachyponera luteipes K</i>   | 1.69      | 0.07         | 0.65         | 0.40         | 1.36         |
| <i>Brachyponera luteipes L</i>   | 1.24      | 0.11         | 0.61         | 0.40         | 1.25         |
| <i>Camponotus cf. wroughtoni</i> | 1.55      | 0.19         | 0.71         | 0.26         | 1.42         |
| <i>Camponotus crassiquamis</i>   | 2.75      | 0.16         | 0.85         | 0.27         | 1.95         |
| <i>Camponotus holosericeus</i>   | 4.05      | 0.12         | 0.79         | 0.26         | 1.98         |
| <i>Camponotus invidus</i>        | 2.83      | 0.16         | 0.74         | 0.23         | 1.52         |
| <i>Camponotus lasiselene</i>     | 1.42      | 0.16         | 0.68         | 0.28         | 1.42         |
| <i>Camponotus leonardi</i>       | 2.05      | 0.21         | 0.68         | 0.28         | 2.10         |
| <i>Camponotus marginatus</i>     | 2.50      | 0.18         | 0.75         | 0.23         | 1.58         |
| <i>Camponotus mitis</i>          | 3.68      | 0.14         | 0.94         | 0.22         | 2.07         |
| <i>Camponotus nicobarensis</i>   | 2.36      | 0.17         | 0.81         | 0.27         | 1.90         |
| <i>Camponotus politae</i>        | 1.60      | 0.19         | 0.97         | 0.22         | 2.03         |
| <i>Camponotus radiatus</i>       | 1.30      | 0.23         | 0.58         | 0.23         | 1.31         |
| <i>Camponotus rothneyi</i>       | 2.10      | 0.17         | 0.67         | 0.26         | 2.19         |
| <i>Camponotus singularis</i>     | 5.00      | 0.13         | 0.90         | 0.27         | 2.11         |
| <i>Camponotus sp. H</i>          | 2.48      | 0.18         | 0.77         | 0.22         | 1.54         |
| <i>Camponotus sp. K</i>          | 1.70      | 0.19         | 0.72         | 0.26         | 1.56         |
| <i>Camponotus sp. L</i>          | 1.35      | 0.19         | 0.70         | 0.26         | 1.41         |
| <i>Camponotus vitreus</i>        | 1.75      | 0.21         | 0.77         | 0.26         | 1.93         |
| <i>Cardiocondyla wroughtonii</i> | 0.49      | 0.19         | 0.63         | 0.37         | 1.16         |
| <i>Carebara acutispina</i>       | 0.40      | 0.03         | 0.55         | 0.50         | 1.00         |
| <i>Carebara affinis</i>          | 0.75      | 0.07         | 0.65         | 0.46         | 1.54         |
| <i>Carebara altinoda</i>         | 0.45      | 0.04         | 0.65         | 0.46         | 1.19         |
| <i>Carebara obtusidenta</i>      | 0.33      | 0.03         | 0.61         | 0.50         | 1.09         |
| <i>Carebara rectidorsa</i>       | 0.34      | 0.03         | 0.61         | 0.45         | 1.09         |
| <i>Carebara reticapita</i>       | 0.31      | 0.03         | 0.59         | 0.47         | 0.94         |
| <i>Carebara trechiderus</i>      | 0.79      | 0.07         | 0.71         | 0.50         | 1.61         |
| <i>Cataulacus granulatus</i>     | 1.37      | 0.32         | 0.43         | 0.28         | 1.16         |
| <i>Cerapachys longitarsus</i>    | 1.25      | 0.18         | 0.28         | 0.30         | 1.00         |
| <i>Cerapachys sulcinodis</i>     | 2.08      | 0.13         | 0.45         | 0.35         | 1.22         |
| <i>Crematogaster dalyi</i>       | 0.99      | 0.19         | 0.68         | 0.44         | 1.52         |
| <i>Crematogaster ebenina</i>     | 0.95      | 0.20         | 0.70         | 0.41         | 1.58         |
| <i>Crematogaster ferrarii</i>    | 0.82      | 0.18         | 0.64         | 0.43         | 1.45         |
| <i>Crematogaster hodgsoni</i>    | 0.94      | 0.19         | 0.66         | 0.43         | 1.40         |
| <i>Crematogaster macaoensis</i>  | 1.08      | 0.19         | 0.70         | 0.33         | 1.69         |
| <i>Crematogaster matsumurai</i>  | 0.78      | 0.18         | 0.62         | 0.38         | 1.28         |
| <i>Crematogaster millardi</i>    | 0.66      | 0.18         | 0.58         | 0.39         | 1.20         |
| <i>Crematogaster osakensis</i>   | 0.63      | 0.20         | 0.70         | 0.42         | 1.42         |

|                                         |      |      |      |      |      |
|-----------------------------------------|------|------|------|------|------|
| <i>Crematogaster rogenhoferi</i>        | 0.92 | 0.20 | 0.71 | 0.39 | 1.66 |
| <i>Crematogaster subnuda</i>            | 1.01 | 0.20 | 0.76 | 0.36 | 1.71 |
| <i>Crematogaster wroughtoni</i>         | 1.03 | 0.20 | 0.89 | 0.41 | 1.83 |
| <i>Crematogaster zoceensi</i>           | 0.80 | 0.21 | 0.78 | 0.45 | 1.62 |
| <i>Cryptopone sauteri</i>               | 2.37 | 0.06 | 0.49 | 0.44 | 0.98 |
| <i>Diacamma rugosum</i>                 | 3.72 | 0.13 | 0.74 | 0.37 | 1.52 |
| <i>Dilobocondyla gasteroreticulatus</i> | 1.56 | 0.17 | 0.45 | 0.35 | 1.03 |
| <i>Discothyrea banna</i>                | 0.76 | 0.13 | 0.70 | 0.39 | 1.34 |
| <i>Discothyrea diana</i>                | 0.57 | 0.06 | 0.59 | 0.35 | 1.12 |
| <i>Dolichoderus affinis</i>             | 1.27 | 0.19 | 0.73 | 0.36 | 1.84 |
| <i>Dolichoderus feae</i>                | 1.97 | 0.17 | 0.72 | 0.33 | 2.07 |
| <i>Dolichoderus incisus</i>             | 1.26 | 0.18 | 0.72 | 0.35 | 1.87 |
| <i>Dolichoderus moggridgei</i>          | 0.90 | 0.23 | 0.73 | 0.38 | 1.73 |
| <i>Dolichoderus squamanodus</i>         | 1.10 | 0.20 | 0.64 | 0.39 | 1.44 |
| <i>Dolichoderus taprobanae</i>          | 0.83 | 0.23 | 0.74 | 0.40 | 1.69 |
| <i>Dolichoderus thoracicus</i>          | 1.19 | 0.19 | 0.67 | 0.37 | 1.69 |
| <i>Echinopla cherapunjiensis</i>        | 2.01 | 0.17 | 0.73 | 0.30 | 1.48 |
| <i>Ectomomyrmex annamita</i>            | 2.10 | 0.07 | 0.52 | 0.38 | 0.98 |
| <i>Ectomomyrmex javana</i>              | 3.39 | 0.08 | 0.57 | 0.40 | 1.21 |
| <i>Ectomomyrmex leeuwenhoeki</i>        | 2.58 | 0.09 | 0.55 | 0.40 | 1.10 |
| <i>Ectomomyrmex zhengi</i>              | 4.24 | 0.09 | 0.59 | 0.41 | 1.26 |
| <i>Emeryopone melaina</i>               | 1.56 | 0.05 | 0.63 | 0.51 | 1.00 |
| <i>Euponera pilosior</i>                | 1.56 | 0.03 | 0.45 | 0.39 | 1.03 |
| <i>Gauromyrmex cf. acanthinus</i>       | 0.65 | 0.17 | 0.52 | 0.29 | 1.07 |
| <i>Gnamptogenys bicolor</i>             | 1.66 | 0.12 | 0.58 | 0.36 | 1.20 |
| <i>Hypoponera cf. sauteri</i>           | 0.56 | 0.04 | 0.48 | 0.34 | 0.91 |
| <i>Hypoconerops confinis</i>            | 1.05 | 0.04 | 0.59 | 0.38 | 1.17 |
| <i>Hypoconerops nippona</i>             | 0.95 | 0.04 | 0.57 | 0.35 | 1.21 |
| <i>Hypoconerops sauteri</i>             | 0.72 | 0.04 | 0.56 | 0.35 | 1.06 |
| <i>Hypoconerops truncata</i>            | 1.35 | 0.06 | 0.59 | 0.38 | 1.16 |
| <i>Kartidris sparsipila</i>             | 1.20 | 0.17 | 0.69 | 0.42 | 1.64 |
| <i>Leptogenys birmana</i>               | 2.68 | 0.10 | 0.53 | 0.41 | 1.25 |
| <i>Leptogenys kitteli</i>               | 2.93 | 0.12 | 0.67 | 0.32 | 1.45 |
| <i>Leptogenys kraepelini</i>            | 3.13 | 0.13 | 0.64 | 0.28 | 1.48 |
| <i>Leptogenys pangui</i>                | 4.70 | 0.15 | 0.74 | 0.24 | 1.68 |
| <i>Leptogenys processionalis</i>        | 1.90 | 0.09 | 0.53 | 0.37 | 1.16 |
| <i>Liometopum sinense</i>               | 1.37 | 0.17 | 0.69 | 0.35 | 1.66 |
| <i>Lophomyrmex quadrispinosus</i>       | 0.90 | 0.16 | 0.74 | 0.44 | 1.59 |
| <i>Meranoplus laeiventrtris</i>         | 1.10 | 0.18 | 0.69 | 0.43 | 1.53 |
| <i>Mesoponera melanaria</i>             | 2.70 | 0.07 | 0.60 | 0.44 | 1.34 |
| <i>Monomorium destructor</i>            | 0.56 | 0.05 | 0.65 | 0.40 | 1.30 |
| <i>Monomorium latinode</i>              | 0.64 | 0.15 | 0.74 | 0.45 | 1.44 |
| <i>Monomorium orientale</i>             | 0.45 | 0.13 | 0.65 | 0.38 | 1.09 |
| <i>Monomorium pharaonis</i>             | 0.69 | 0.13 | 0.74 | 0.36 | 1.30 |
| <i>Myopias conicara</i>                 | 2.93 | 0.11 | 0.49 | 0.47 | 1.02 |
| <i>Myrmecina curvispina</i>             | 1.00 | 0.12 | 0.72 | 0.44 | 1.24 |
| <i>Myrmecina guangxiensis</i>           | 0.67 | 0.08 | 0.65 | 0.46 | 1.08 |
| <i>Myrmecina sinensis</i>               | 0.68 | 0.06 | 0.74 | 0.50 | 1.03 |
| <i>Myrmecina striata</i>                | 0.80 | 0.08 | 0.60 | 0.47 | 1.01 |
| <i>Mystrium oculatum</i>                | 1.36 | 0.03 | 0.59 | 0.88 | 1.17 |
| <i>Nylanderia birmana</i>               | 1.20 | 0.17 | 0.90 | 0.36 | 1.82 |
| <i>Nylanderia flavipes</i>              | 0.77 | 0.13 | 0.92 | 0.38 | 1.72 |
| <i>Nylanderia vividula</i>              | 0.56 | 0.17 | 0.88 | 0.42 | 1.57 |
| <i>Odontomachus circulus</i>            | 3.97 | 0.09 | 0.83 | 0.54 | 1.70 |
| <i>Odontomachus monticola</i>           | 3.55 | 0.08 | 0.78 | 0.51 | 1.56 |
| <i>Odontoponera transversa</i>          | 3.78 | 0.11 | 0.57 | 0.36 | 1.33 |

|                                    |      |      |      |      |      |
|------------------------------------|------|------|------|------|------|
| <i>Oecophylla smaragdina</i>       | 3.20 | 0.17 | 0.91 | 0.39 | 2.30 |
| <i>Paraparatrechina sauteri</i>    | 0.48 | 0.22 | 0.87 | 0.44 | 1.63 |
| <i>Pheidole cf. acantha</i>        | 1.12 | 0.14 | 0.93 | 0.50 | 1.91 |
| <i>Pheidole cf. quadricuspis</i>   | 0.88 | 0.16 | 0.91 | 0.48 | 1.68 |
| <i>Pheidole fervens</i>            | 0.98 | 0.13 | 0.94 | 0.46 | 1.76 |
| <i>Pheidole fortis</i>             | 1.01 | 0.15 | 0.88 | 0.49 | 1.78 |
| <i>Pheidole gatesi</i>             | 1.60 | 0.14 | 0.88 | 0.49 | 2.07 |
| <i>Pheidole laevicolor</i>         | 0.80 | 0.13 | 0.79 | 0.47 | 1.44 |
| <i>Pheidole ochracea</i>           | 0.85 | 0.15 | 0.96 | 0.43 | 1.80 |
| <i>Pheidole parva</i>              | 0.71 | 0.13 | 0.74 | 0.45 | 1.42 |
| <i>Pheidole pieli</i>              | 0.56 | 0.16 | 0.72 | 0.47 | 1.33 |
| <i>Pheidole plagiaria</i>          | 1.20 | 0.14 | 0.95 | 0.43 | 1.91 |
| <i>Pheidole rugithorax</i>         | 0.91 | 0.15 | 0.89 | 0.43 | 1.71 |
| <i>Pheidole smythiesii</i>         | 1.38 | 0.13 | 0.93 | 0.50 | 2.05 |
| <i>Pheidole tjibodana</i>          | 0.69 | 0.14 | 0.70 | 0.50 | 1.33 |
| <i>Pheidole tumida</i>             | 1.05 | 0.16 | 0.95 | 0.42 | 1.93 |
| <i>Pheidole vietii</i>             | 0.74 | 0.10 | 0.78 | 0.49 | 1.57 |
| <i>Pheidole vulgaris</i>           | 0.75 | 0.13 | 0.76 | 0.45 | 1.52 |
| <i>Pheidole watsoni</i>            | 0.62 | 0.16 | 0.74 | 0.47 | 1.46 |
| <i>Plagiolepis alluaudi</i>        | 0.46 | 0.20 | 0.78 | 0.35 | 1.33 |
| <i>Platythyrea parallela</i>       | 2.02 | 0.10 | 0.45 | 0.26 | 1.00 |
| <i>Polyrhachis armata</i>          | 3.64 | 0.15 | 0.89 | 0.25 | 2.44 |
| <i>Polyrhachis bicolor</i>         | 2.25 | 0.19 | 0.92 | 0.29 | 2.14 |
| <i>Polyrhachis brevicorpa</i>      | 2.15 | 0.23 | 0.93 | 0.33 | 2.28 |
| <i>Polyrhachis ceylonensis</i>     | 2.15 | 0.20 | 0.94 | 0.29 | 1.97 |
| <i>Polyrhachis cf. clypeata</i>    | 2.35 | 0.21 | 0.94 | 0.30 | 2.00 |
| <i>Polyrhachis cf. tibialis</i>    | 2.19 | 0.18 | 0.93 | 0.28 | 1.80 |
| <i>Polyrhachis clypeata</i>        | 2.30 | 0.22 | 0.72 | 0.28 | 1.52 |
| <i>Polyrhachis dentihumera</i>     | 2.10 | 0.21 | 1.01 | 0.35 | 2.55 |
| <i>Polyrhachis halidayi</i>        | 2.34 | 0.20 | 0.85 | 0.32 | 1.76 |
| <i>Polyrhachis illaudata</i>       | 3.51 | 0.15 | 0.94 | 0.28 | 1.97 |
| <i>Polyrhachis moesta</i>          | 1.87 | 0.21 | 0.97 | 0.29 | 1.89 |
| <i>Polyrhachis orbihumera</i>      | 1.85 | 0.24 | 0.95 | 0.35 | 2.27 |
| <i>Polyrhachis phipsoni</i>        | 2.15 | 0.19 | 0.94 | 0.28 | 2.21 |
| <i>Polyrhachis pubescens</i>       | 2.15 | 0.16 | 0.95 | 0.28 | 1.86 |
| <i>Polyrhachis sp. C</i>           | 4.30 | 0.16 | 0.93 | 0.27 | 2.14 |
| <i>Polyrhachis thompsoni</i>       | 2.50 | 0.18 | 0.89 | 0.27 | 2.04 |
| <i>Polyrhachis thrinax</i>         | 2.20 | 0.20 | 0.89 | 0.34 | 1.89 |
| <i>Polyrhachis tibialis</i>        | 2.17 | 0.18 | 0.93 | 0.27 | 1.95 |
| <i>Ponera baka</i>                 | 0.60 | 0.03 | 0.47 | 0.37 | 0.82 |
| <i>Ponera cf. diodonta</i>         | 0.76 | 0.04 | 0.50 | 0.34 | 0.89 |
| <i>Ponera longlina</i>             | 0.82 | 0.04 | 0.54 | 0.38 | 0.97 |
| <i>Ponera menglana</i>             | 0.90 | 0.04 | 0.57 | 0.40 | 0.97 |
| <i>Ponera nangongshana</i>         | 0.76 | 0.04 | 0.54 | 0.38 | 1.02 |
| <i>Prenolepis emmae</i>            | 1.05 | 0.21 | 0.88 | 0.38 | 1.74 |
| <i>Prenolepis magnocula</i>        | 1.01 | 0.23 | 1.13 | 0.34 | 2.32 |
| <i>Prenolepis naoroji</i>          | 1.13 | 0.21 | 1.04 | 0.34 | 2.14 |
| <i>Prenolepis sphingthorax</i>     | 1.29 | 0.14 | 0.97 | 0.29 | 1.97 |
| <i>Pristomyrmex brevispinosus</i>  | 1.09 | 0.14 | 0.95 | 0.53 | 1.76 |
| <i>Pristomyrmex hamatus</i>        | 0.92 | 0.17 | 0.96 | 0.54 | 1.64 |
| <i>Proceratium cf. longigaster</i> | 1.50 | 0.05 | 0.56 | 0.40 | 1.23 |
| <i>Proceratium longigaster</i>     | 0.74 | 0.03 | 0.57 | 0.41 | 1.06 |
| <i>Proceratium zhaoi</i>           | 0.64 | 0.03 | 0.56 | 0.50 | 1.13 |
| <i>Pseudolasius silvestrii</i>     | 0.84 | 0.12 | 0.77 | 0.44 | 1.67 |
| <i>Pseudoneoponera rufipes</i>     | 5.10 | 0.10 | 0.51 | 0.40 | 1.20 |
| <i>Recurvidris recurvispinosa</i>  | 0.67 | 0.17 | 0.65 | 0.39 | 1.27 |

|                                      |      |      |      |      |      |
|--------------------------------------|------|------|------|------|------|
| <i>Rhopalomastix rothneyi</i>        | 0.66 | 0.17 | 0.32 | 0.33 | 0.97 |
| <i>Solenopsis indagatrix</i>         | 0.44 | 0.09 | 0.59 | 0.41 | 1.02 |
| <i>Strumigenys assamensis</i>        | 0.76 | 0.11 | 0.41 | 0.30 | 1.24 |
| <i>Strumigenys cf. bryanti</i>       | 0.73 | 0.08 | 0.52 | 0.50 | 1.17 |
| <i>Strumigenys cf. exilirina</i>     | 0.70 | 0.09 | 0.49 | 0.37 | 1.03 |
| <i>Strumigenys doriae</i>            | 1.20 | 0.05 | 0.50 | 0.50 | 1.38 |
| <i>Strumigenys mitis</i>             | 0.43 | 0.12 | 0.49 | 0.32 | 1.16 |
| <i>Strumigenys nanzanensis</i>       | 0.68 | 0.12 | 0.56 | 0.39 | 1.25 |
| <i>Strumigenys nongba</i>            | 0.60 | 0.08 | 0.54 | 0.38 | 1.39 |
| <i>Strumigenys rallarhina</i>        | 0.59 | 0.07 | 0.64 | 0.50 | 1.26 |
| <i>Strumigenys sauteri</i>           | 0.61 | 0.08 | 0.40 | 0.13 | 1.02 |
| <i>Strumigenys strugax</i>           | 0.68 | 0.08 | 0.46 | 0.43 | 1.10 |
| <i>Strumigenys sydorata</i>          | 0.71 | 0.09 | 0.41 | 0.33 | 1.08 |
| <i>Strumigenys tritomea</i>          | 0.83 | 0.10 | 0.44 | 0.36 | 1.25 |
| <i>Tapinoma indicum</i>              | 0.46 | 0.22 | 0.70 | 0.43 | 1.43 |
| <i>Technomyrmex albipes</i>          | 0.84 | 0.18 | 0.69 | 0.34 | 1.37 |
| <i>Technomyrmex antennis</i>         | 1.29 | 0.16 | 0.79 | 0.27 | 1.58 |
| <i>Technomyrmex elatior</i>          | 0.93 | 0.19 | 0.74 | 0.38 | 1.49 |
| <i>Technomyrmex kraepelini</i>       | 1.36 | 0.16 | 0.79 | 0.30 | 1.61 |
| <i>Technomyrmex obscurior</i>        | 1.32 | 0.16 | 0.79 | 0.26 | 1.59 |
| <i>Technomyrmex pratensis</i>        | 1.02 | 0.20 | 0.66 | 0.26 | 1.36 |
| <i>Technomyrmex vitiensis</i>        | 1.06 | 0.19 | 0.72 | 0.26 | 1.42 |
| <i>Technomyrmex yamanei</i>          | 1.19 | 0.16 | 0.73 | 0.36 | 1.80 |
| <i>Temnothorax angulohumerus</i>     | 0.83 | 0.17 | 0.69 | 0.39 | 1.39 |
| <i>Temnothorax cf. congruus</i>      | 0.74 | 0.19 | 0.57 | 0.35 | 1.43 |
| <i>Temnothorax cf. zhejiangensis</i> | 0.66 | 0.21 | 0.55 | 0.29 | 1.18 |
| <i>Temnothorax sp. C</i>             | 0.79 | 0.15 | 0.50 | 0.27 | 1.05 |
| <i>Tetramorium aptum</i>             | 0.79 | 0.15 | 0.60 | 0.44 | 1.24 |
| <i>Tetramorium indosinense</i>       | 1.01 | 0.16 | 0.68 | 0.50 | 1.51 |
| <i>Tetramorium kraepelini</i>        | 0.62 | 0.19 | 0.55 | 0.47 | 1.13 |
| <i>Tetramorium lanuginosum</i>       | 0.70 | 0.19 | 0.55 | 0.43 | 1.15 |
| <i>Tetramorium laparum</i>           | 0.78 | 0.19 | 0.63 | 0.42 | 1.27 |
| <i>Tetramorium melleus</i>           | 0.90 | 0.16 | 0.73 | 0.47 | 1.71 |
| <i>Tetramorium nipponense</i>        | 1.03 | 0.19 | 0.57 | 0.39 | 1.21 |
| <i>Tetramorium obtusidens</i>        | 0.78 | 0.19 | 0.54 | 0.36 | 1.12 |
| <i>Tetramorium pacificum</i>         | 1.06 | 0.19 | 0.57 | 0.32 | 1.38 |
| <i>Tetramorium smithi</i>            | 1.02 | 0.17 | 0.61 | 0.41 | 1.31 |
| <i>Tetramorium wroughtonii</i>       | 0.80 | 0.18 | 0.67 | 0.50 | 1.49 |
| <i>Tetraoponera allaborans</i>       | 1.44 | 0.24 | 0.35 | 0.24 | 1.00 |
| <i>Tetraoponera attenuata</i>        | 2.13 | 0.18 | 0.36 | 0.24 | 1.03 |
| <i>Tetraoponera furcata</i>          | 1.27 | 0.26 | 0.35 | 0.24 | 1.01 |
| <i>Vollenhovia emeryi</i>            | 0.74 | 0.16 | 0.48 | 0.36 | 0.96 |
| <i>Vollenhovia lucimandibula</i>     | 1.08 | 0.10 | 0.49 | 0.43 | 1.00 |
| <i>Vombisidris tibeta</i>            | 1.01 | 0.18 | 0.53 | 0.35 | 1.13 |

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**Table 5.** Incidence data of species/morphospecies with eye length >0 in each study plot in Ailaoshan.

| Species/morphospecies             | 2000     |          |          |          |          | 2200     |          |          |          |          | 2400     |          |          |          |          | 2600     |          |          |          |          |
|-----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|                                   | 217<br>0 | 212<br>0 | 210<br>7 | 202<br>4 | 200<br>6 | 221<br>9 | 217<br>7 | 225<br>3 | 218<br>6 | 222<br>9 | 245<br>0 | 248<br>9 | 248<br>0 | 247<br>7 | 247<br>5 | 259<br>6 | 260<br>4 | 264<br>6 | 263<br>6 | 261<br>5 |
| <i>Amblyopone amblyops</i>        |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Amblyopone awa</i>             |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |          |          |          |          |          |          |
| <i>Amblyopone octodentata</i>     |          |          |          | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Amblyopone triloba</i>         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |          |
| <i>Brachyponera luteipes</i> B    | X        |          | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Camponotus</i> sp. A           |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Camponotus</i> sp. B           |          |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Carebara obtusidentata</i>     | X        | X        | X        | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Cerapachys biroi</i>           |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Cerapachys sulcinodis</i>      | X        |          | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          | X        |
| <i>Crematogaster inflata</i>      |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Ectomomyrmex javana</i>        | X        | X        | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Gaoligongidris planodorsa</i>  | X        | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Gnamptogenys coccinea</i>      | X        |          |          |          |          | X        |          | X        |          | X        |          |          |          |          |          |          |          |          |          |          |
| <i>Hypoponera nippona</i>         |          | X        | X        | X        | X        | X        | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |
| <i>Hypoponera truncata</i>        |          | X        | X        | X        |          | X        | X        | X        |          | X        |          |          |          |          |          |          |          |          |          |          |
| <i>Lasius draco</i>               | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Monomorium gracillimum</i>     | X        |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Monomorium pharaonis</i>       |          |          |          |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |
| <i>Myrmecina guangxiensis</i>     |          | X        | X        | X        | X        |          | X        |          |          | X        |          |          | X        | X        | X        | X        | X        | X        | X        | X        |
| <i>Myrmecina striata</i>          | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Myrmica margaritae</i>         |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Myrmica ritae</i>              |          |          |          |          | X        |          |          |          |          |          | X        |          |          | X        | X        |          |          |          |          | X        |
| <i>Myrmica</i> sp. A              | X        | X        |          |          |          | X        |          |          |          | X        |          |          |          |          | X        |          | X        |          |          |          |
| <i>Myrmica</i> sp. C              |          |          |          |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |
| <i>Myrmica titanica</i>           | X        |          | X        |          |          | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |
| <i>Nylanderia</i> sp. B           |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Nylanderia vividula</i>        | X        | X        |          | X        | X        | X        | X        | X        | X        |          | X        | X        | X        | X        | X        |          |          |          |          |          |
| <i>Nylanderia yerburyi</i>        |          | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Perissomyrmex fissus</i>       |          |          |          |          |          |          |          |          |          |          | X        | X        | X        | X        | X        | X        | X        | X        | X        |          |
| <i>Pheidole indosinensis</i>      | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        |          |          |          |          |          |
| <i>Pheidole magna</i>             | X        |          | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Ponera</i> cf. <i>pianmana</i> | X        | X        | X        |          |          | X        | X        | X        | X        | X        |          |          |          |          |          |          |          |          |          |          |
| <i>Ponera menglana</i>            |          |          |          |          |          |          |          |          |          |          | X        | X        | X        | X        | X        |          |          |          |          |          |
| <i>Ponera pianmana</i>            | X        | X        | X        | X        | X        | X        | X        | X        | X        | X        |          | X        | X        | X        | X        |          |          |          |          |          |
| <i>Prenolepis</i> sp. A           | X        | X        |          |          |          |          |          | X        |          |          |          |          |          |          |          |          |          |          |          |          |
| <i>Proceratium longigaster</i>    | X        | X        |          |          |          |          |          |          |          |          |          |          |          | X        | X        |          |          |          |          |          |











|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <i>Ponera baka</i>                 |   | X |   | X |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| <i>Ponera cf. diodonta</i>         |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |
| <i>Ponera longlina</i>             |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | X |
| <i>Ponera menglana</i>             |   | X |   | X |   | X |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <i>Ponera nangongshana</i>         |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <i>Prenolepis emmae</i>            |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   | X |
| <i>Prenolepis magnocula</i>        | X | X |   | X | X |   |   |   | X |   |   |   |   |   |   |   |   |   | X |
| <i>Prenolepis naoroji</i>          |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   | X |
| <i>Prenolepis sphingthorax</i>     | X | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <i>Pristomyrmex brevispinosus</i>  | X | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <i>Pristomyrmex hamatus</i>        | X |   |   |   | X |   |   |   |   |   | X | X |   |   |   |   |   |   | X |
| <i>Proceratium cf. longigaster</i> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <i>Proceratium longigaster</i>     |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <i>Proceratium zhaoi</i>           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <i>Pseudolasius silvestrii</i>     | X | X |   | X | X | X | X | X | X | X | X | X | X | X |   |   |   |   |   |
| <i>Pseudoneoponera rufipes</i>     |   |   |   |   |   |   | X | X |   |   |   |   |   |   |   |   |   |   |   |
| <i>Recurvidris recurvispinosa</i>  |   |   |   |   | X | X | X | X |   |   | X |   | X | X | X | X | X | X |   |
| <i>Rhopalomastix rothneyi</i>      |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |
| <i>Solenopsis indagatrix</i>       | X |   | X | X | X | X |   |   |   |   | X |   | X |   |   |   |   |   | X |
| <i>Strumigenys assamensis</i>      |   |   |   |   | X |   |   |   |   |   | X | X |   |   |   |   |   |   | X |
| <i>Strumigenys cf. bryanti</i>     |   |   |   |   | X | X |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <i>Strumigenys cf. exhilirina</i>  |   |   |   |   | X | X |   |   |   |   |   |   |   |   |   |   |   |   | X |
| <i>Strumigenys doriae</i>          |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <i>Strumigenys mitis</i>           | X | X | X |   | X | X |   |   | X | X | X |   |   |   | X |   |   |   |   |
| <i>Strumigenys nanzanensis</i>     |   | X | X | X | X |   | X | X | X | X | X | X | X | X | X |   |   | X |   |
| <i>Strumigenys nongba</i>          |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   | X |
| <i>Strumigenys rallarhina</i>      | X | X | X | X | X | X | X | X | X | X |   |   |   |   |   |   |   |   |   |
| <i>Strumigenys sauteri</i>         |   |   |   | X | X |   |   |   | X | X |   |   |   |   |   |   |   |   |   |
| <i>Strumigenys strugax</i>         | X |   | X | X | X | X | X | X | X | X | X | X | X | X |   |   |   |   |   |
| <i>Strumigenys sydorata</i>        |   |   | X | X |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| <i>Strumigenys tritomea</i>        |   |   |   | X |   |   |   |   | X |   |   |   |   |   |   |   |   |   | X |
| <i>Tapinoma indicum</i>            |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <i>Technomyrmex albipes</i>        |   |   |   |   | X | X | X | X | X | X | X | X | X | X | X | X | X | X |   |
| <i>Technomyrmex antennus</i>       | X |   |   | X | X |   |   |   | X | X | X |   |   |   |   |   |   |   | X |
| <i>Technomyrmex elatior</i>        | X |   |   | X |   |   |   |   | X |   |   |   |   |   |   |   |   |   |   |
| <i>Technomyrmex kraepelini</i>     | X |   |   | X |   |   | X | X |   |   |   |   |   | X | X |   |   |   |   |
| <i>Technomyrmex obscurior</i>      | X |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |   |   | X |
| <i>Technomyrmex pratensis</i>      |   |   | X |   |   |   |   |   |   |   | X | X | X | X |   |   |   |   |   |

