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# Ant Fauna of Peninsular Botanical Garden (Khao Chong), Trang Province, Southern Thailand (Hymenoptera: Formicidae)

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**ABSTRACT.- Ant fauna was investigated in the Peninsular Botanical Garden (Khao Chong), Southern Thailand by hand collecting, sifting and colony searching in 2000, 2001, 2003 and 2004. A total of 155 species belonging to 60 genera in twelve subfamilies is recorded here. Species-rich genera are *Pheidole, Polyrhachis, Camponotus, Leptogenys, Pachycondyla,* and *Crematogaster.* Rare genera are *Sphinctomyrmex, Leptanilla* and *Eurhopalothrix.* Ant fauna of this area is discussed, in comparison with those of other sites in Southeast Asia and some places in Thailand. Species composition in this area was similar to that in lowland rainforests of other sites, but remarkably different from that in montane forests.**

**KEY WORDS** : Ant fauna, Peninsular Botanical Garden (Khao Chong), Thailand, Trang Province, Formicidae

## INTRODUCTION

Ants are well-recognized insects and can be found in almost all terrestrial habitats on the earth (Bolton, 1994). Most ants are prevalent predators and thus are likely to have an important function in tropical ecosystems (Ito, *et al.*, 2001). Ants are now regarded to be one of the useful indicators of biodiversity (Andersen, 1990; Majer and Beeston, 1996; Abensperg-Traun *et al.*, 1996; Longino and Colwell, 1997; Lawton *et al.*, 1998; Poonjampa and Wiwatwitaya, 2002). Recently ant diversity has been studied in various localities in Southeast Asia, e.g., in Borneo (Yamane, Itino and Abd. Nona, 1996; Yamane, 1997; Brühl *et al.*, 1998; Brühl *et al.*, 1999; Hashimoto, Yamane and Mohamed, 2001; Eguchi and Yamane, 2003; Brühl *et al.*, 2003; Widodo *et al.*, 2004), Java (Ito *et al.*, 2001), North Vietnam (Bui, 2000; Yamane 2003; Eguchi *et al.*, 2005), and southern China (Xu *et al.*, 1999; Xu Yang and Hu, 1999). In Thailand, intensive samplings have been carried out in several national parks, wildlife sanctuaries and forest reserves, e.g., in Ton Nga Chang Wildlife Sanctuary (Tongjerm *et al.*, 2000), Tarutao National Park (Watanasit *et al.*, 2000), Khao Yai National Park (Wiwatwitaya and Jaitrong, 2000; Poonjampa and Wiwatwitaya, 2002). Jaitrong and Nabhitabhata (2005) recorded approximately 80 named ant species from the Peninsular Botanical Garden (Khao Chong), southern Thailand. The present paper deals with the whole myrmecofauna of this botanical garden, including unidentified species.

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## Materials and Methods

The samplings of ants were conducted in April and July 2000, September and November 2001, November 2003, and November 2004. Net 3 days were devoted by two persons in 2000, net 7 days by three persons in 2001, 2 days by one person in 2003, and net 3 days by one person in 2004.

Soil and litter sifting and hand collecting on the ground (G) or tree trunk (T) were principally employed to collect ants. We also tried to locate colonies at various sites, e.g. in the soil (S), under the rock (R), in rotting wood (RW), in leaf litter (L), and on plants or in canopy (P). Most ants were collected in the forest, but some were in more disturbed areas around the Head Quarters. In addition, specimens collected in the site by a curator of Ant Museum, Kasetsart University between 2000 and 2002 are also included.

All of the specimens were kept in 90% alcohol, mounted and examined at the Entomology section, the Natural History Museum, National Science Museum (Thailand), and also at the Ant Museum, Kasetsart University (Thailand).

The unidentified or undescribed species are listed with species codes. The AMK-codes are employed by the Ant Museum, Kasetsart University, the eg-codes by K. Eguchi for *Pheidole* spp., the SKY-codes by Sk. Yamane, and the WJT-codes by W. Jaitrong.

### Study Site

Ants were collected in the Peninsular Botanical Garden (Khao Chong), located in Na Yong district, Trang province, southern Thailand, which covers an area of 1.6 km$^2$. The garden is almost completely a lowland plain with its altitudes between 20 and 120 m above the sea level. The vegetation in study site can be regarded as tropical evergreen forest dominated by certain trees such as *Parashorea stellata* Kurz, *Shorea gratissima* (Wall. ex Kurz) Dyer, *Dipterocarpus grandiflorus* (Blanco) Blanco, and *Millettia atropurpurea* Wall., while the ground level is covered by bamboos, rattans, palms, and climbers.

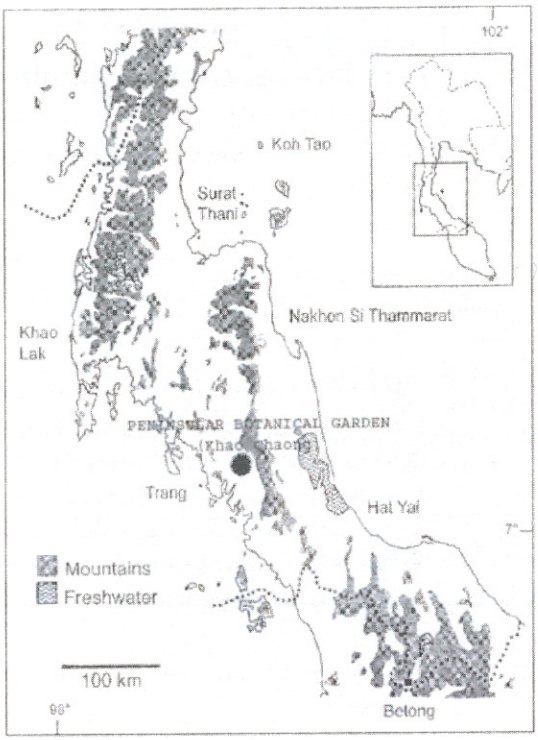


**Figure 1** Map indicating the study site, modified from Kumpfer and Muller (2004).

## Results

A total of 155 species belonging to 60 genera in twelve subfamilies (Dolichoderinae, Formicinae, Pseudomyrmecinae, Cerapachyinae, Aenictinae, Dorylinae, Leptanillinae, Amblyoponinae, Ponerinae, Ectatomminae, Poceratiinae and Myrmicinae) were collected by hand collecting, leaf litter and soil sifting, and location of colonies. Species-rich genera are *Pheidole* (21 species; 13.55%), *Polyrhachis* (11; 7.10%), *Camponotus* (10; 6.45%), *Leptogenys* (8; 5.16%), *Pachycondyla* (8; 5.16%), and *Crematogaster* (6; 3.8%). *Sphinctomyrmex*, *Leptanilla* and *Eurhopalothrix* were rare and only one or two colonies were found for each (Table 1).

Table 2 shows a summary of the results. The species diversity was high, and 30 species remain unidentified.

Seventy-six species (49.03%) that were found nesting in the soil were in the subfamilies other than Pseudomyrmecinae and Aenictinae. Sixty-one species (39.35 %) were found in rotting wood or twigs. Ponerinae (22 spp.), Myrmicinae (22 spp.), and Formicinae (13 spp.) were dominant subfamilies from this nesting site. A few species were found nesting on the tree trunk as *Philidris* sp.1 of WJT, *Tapinoma melanocephalum,* and *Camponotus lasiselene.*

One hundred and thirty-seven species (88.39%) were found in the natural forest, while 18 species (11.61%) around the Head Quarter. The latter included *Anochetus graeffei, Odontomachus simillimus, Odontoponera denticulata, Dolichoderus thoracicus, Iridomyrmex anceps, Technomyrmex kraepelini, Camponotus rufoglaucus, Paratrechina longicornis, Oecophylla smaragdina, Anoplolepis gracilipes, Meranoplus bicolor, Pheidole megacephala, Pheidole yeensis, Pheidologeton diversus, Monomorium destructor, Monomorium pharaonis, Solenopsis geminata, and Tetraponera rufonigra.*

This paper constitutes a second part of the ant fauna in the botanical garden (see Jaitrong and Nabhitabhata, 2005). Several species are new to southern Thailand and some others are new to Thailand.

**Table 1** List of ant species collected in the Peninsular Botanical Garden (Khao Chong). Abbreviations for nesting sites are given in the text.

**DOLICHODERINAE** (5 genera, 10 species)

1. *Dolichoderus cuspidatus* Viehmeyer — P
2. *D. sulcaticeps* (Mayr) — P
3. *D. thoracicus* (Fr. Smith) — P, G
4. *D. tuberifer* — P
5. *Iridomyrmex anceps* (Roger) — S (inhabiting disturbed areas)
6. *Philidris* sp. 2 of WJT (= sp.1 of AMK) — T
7. *Tapinoma melanocephalum* (Fabricius) — S, T
8. *Technomyrmex butteli* Forel — L
9. *T. kraepelini* Forel — RW, L
10. *T.* sp.4 of WJT — RW, L

**FORMICINAE** (11 genera, 33 species)

11. *Acropygra acutiventris* Roger —S, RW
12. *A.* sp.2 of WJT (= sp.3 of AMK) — S
13. Anoplolepis gracilipes (Fr. Smith) — S, RW, R
14. *C.* (*Colobopsis*) *leonadi* Emery – group. — T, RW
15. *C.* (*Colobopsis*) *saundersi* Emery — T, RW
16. *C.* (*Dinomyrmex*) *gigas* Latreille — RW (big logs)
17. *C.* (*Myrmemblys*) sp. 16 of WJT — P
18. *C.* (*Myrmosaulus*) *camelinus* (Fr. Smith) — S
19. *C.* (*Myrmosericus*) *rufoglaucus* (Jerdon) — S (inhabiting disturbed areas)
20. *C.* (*Myrmotarsus*) *rufifemur* Emery — S
21. *C.* (*Orthonotomyrmex*) *lasiselene* Wang & Wu - group. -—P, T
22. *C.* (*Tanaemyrmex*) sp.13 of WJT — S
23. C. nicobarensis Mayr — RW
24. *Euprenolepis procera* (Emery) — RW
25. *Myrmoteras* sp.1 of WJT — S
26. *Oecophylla smaragdina* (Fabricius) — P
27. *Paratrichena longicornis* (Latreille) —RW, L
28. *P. opaca* (Emery) — R
29. *P.* sp.10 of WJT — L
30. *Plagiolepis* sp.1 of WJT — S
31. *Polyrhachis* (*Campomyrma*) *halidayi* Emery — RW
32. *P.* (*Campomyrma*) *hauxwelli* Bingham —RW
33. *P.* (*Cyrtomyrma*) *laevissima* Fr. Smith — P
34. P. (Myrma) illaudata *Walker* — *S*
35. *P.* (*Myrma*) *proxima* Roger — RW
36. *P.* (*Myrmhopla*) *abdominalis* Fr. Smith — P

**Table 1** Continued.

37. *P.* (*Myrmhopla*) *armata* (Le Guillou) — G, P, RW
38. *P.* (*Myrmhopla*) *dives* Fr. Smith — P
39. *P.* (*Myrmhopla*) *furcata* Fr. Smith — P
41. *P.* (*Myrmhopla*) *pharelata* Menozzi — P
41. *P.* (*polyrhachis*) *bihamata* Drury — L, P
42. *Prenolepis* sp.1 of WJT (=sp.4 of AMK) — RW
43. *Pseudolasius* sp.1 of WJT — S

**PSEUDOMYRMECINAE** (1 genus, 3 species)
44. *Tetraponera allaborans* (Walker) — RW
45. *T. attenuata* Fr. Smith — RW
46. *T. rufonigra* (Jerdon) — RW, P

**CERAPACHYINAE** (2 genera, 2 species)
47. *Cerapachys sulcinodis* Emery — S, R
48. *Sphinctomyrmex* sp.1 of WJY — S (rarespecies found only from one colony)

**AENICTINAE** (1 genus, 4 species)
49. *Aenictus binghami* Forel — G (army ant)
*50. A. dentatus Forel* — G (army ant)
51. *A. laeviceps* (Fr. Smith) — G (army ant)
52. *A.* sp. A (aff. *nishimurai*) — G (army ant)

**DORYINAE** (1 genus, 2 species)
53. *Dorylus laevigatus* (Fr. Smith) — S (army ant)
54. *D. vishnui* Wheeler — S (army ant)

**LEPTANILLINAE** (1 genus, 1 species)
55. *Leptanilla thai* Baroni Urbani —S, RW, R

**AMBLYOPONINAE** (2 genera, 2 species)
*56. Amblyopone reclinata* Mayr — R, RW
57. *Myopopone castanea* (Fr. Smith) — RW

**PONERINAE** (12 genera, 31 species)
58. *Anochetus graffei* Mayr-complex — S
59. *A. rugosum* (Fr. Smith) — S
60. *Centromyrmex feae* Emery — S
61. *Cryptopone* sp.1 of WJT — S
62. *Diacamma rugosum* (Le Guillou) — S
63. *D. sculpturatum* (Fr. Smith) — S
64. *Emeryopone buttelreepeni* (Forel) — L, S
65. *Hypoponera* sp. 1 of WJT — L
66. *H.* sp. 6 of WJT — L, RW

*67. Leptogenys birmana* Forel — S, RW
68. *L. borneensis* Wheeler — S
69. *L. diminuta* (Fr. Smith) — S, G, RW
70. *L. hysterica* Forel — RW
71. *L. kitteli* Mayr — S, G, RW
72. *L. kraepelini* Forel — S, RW
73. *L. mutabilis* (Fr. Smith), S
74. *L. myops* Emery, S
75. *Odotomachus rixosus* Fr. Smith — S, L, RW
76. *O. simillimus* Fr. Smith — S, L
77. *Odontoponera denticulata* (Fr. Smith) — S
78. *O. transversa* Fr. Smith — S
79. *Pachycondyla* (*Brachyponera*) *chinensis* (Emery) — S, L, RW, R
80. *P.* (*Brachyponera*) *luteipes* (Mayr) — S, L, RW, R
81. *P.* (*Brachyponera*) *nigrita* (Mayr) — S, L, RW, R
82. *P.* (*Ectomomyrmex*) *astuta* (Fr. Smith) — S, R
83. *P.* (*Ectomomyrmex*) *leeuwenhoeki* (Forel)
84. *P.* (*Pseudoponera*) *amblyops* (Emery) — S, RW
85. *P.* (*Mesoponera*) *rubra* (Fr. Smith) (= sp. 5 of AMK) — S, RW
86. *P.* sp. 2 of WJT
87. *Platythyrea parallela* (Fr. Smith) — RW
88. *Ponera* sp. 1 of WJT — RW

**ECTATOMMINAE** (1 genus, 4 species)
89. *Gnamptogenys bicolor* (Emery) — RW
90. *G. binghamii* (Forel) — S
91. *G. dammermanni* (Wheeler) — RW
92. *G.* sp. 6 of WJT — RW

**PROCERATIINAE** (2 genera, 2 species)
93. *Proceratium deelemani* Perrault —RW
94. *Probolomyrmex dammermanni* Wheeler — RW

**Table 1** Continued.

**MYRMICINAE** (21 genera, 61 species)

95. *Acanthomyrmex ferox* Emery — S
96. *Cataulacus granulatus* (Latreille) — RW
97. *C. horridus* (Fr. Smith) — RW
98. *Cardiocondyla emeryi* Forel — S
99. *C. nuda* (Mayr) — S, L
100. *C. wroughtonii* (Forel) — S
101. *Crematogaster* (*Crematogaster*) *rogenhoferi* Mayr — P
102. *C.* (*Orthocrema*) sp.8 of WJT — S
103. *C.* (*Oxygyne*) sp.A (= sp.3 of AMK, = sp.46 of SKY) — S
104. *C.* (*Paracrema*) *coriaria* Mayr, — P
105. *C.* (*Paracrema*) *modiglianii* Emery — P
106. *C.* (*Physocrema*) *difformis* Fr. Smith — P
107. *Eurhopalothrix* sp.1 of WJT — RW (very rare species found only from one colony)
108. *Lophomyrmex bedoti* Emery — S
109. *L. lucidus* Menozzi — S
110. *Meranoplus bicolor* (Guerin-Meneville) — S; normally nesting in disturbed areas.
111. *M. castaneus* Fr. Smith — S
112. *Monomorium destructor* (Jerdon) — S, G
113. *M. floricola* (Jerdon) — RW
117. *Pristomyrmex punctatus* (Fr. Smith) — P, G
118. *P. trachylissus* Fr. Smith — S
119. *Pheidole aglae* Forel — RW
120. *P. aristotelis* Forel — RW
121. *P. butteli* Forel — S
122. *P. cariniceps* Eguchi — S
123. *P. clypeocornis* Eguchi — RW
124. *P. elisae* Emery — RW
114. *M. pharaonis* (Linnaeus) — S
115. *Myrmecina* sp.3 of WJT — L
116. *Myrmicaria brunnea* Saunders — S
Found in disturbed areas.
125. *P. fervens* Fr. Smith — S, R
126. *P. hortensis* Forel — RW, R
127. *P. inornata* Eguchi — RW, R
This species nested together with *Odntomachus rixosus* Fr. Smith under rock or rotting log. Eguchi (2001c) also found this species nested together with *O. rixosus* from Khao Yai National Park, Thailand and from Java.
128. *P. longipes* (Fr. Smith) — RW
129. *P. megacephala* (Fabricius) — S
This species inhabits urban and man-made habitats (Eguchi, 2001).
130. *P. plagiaria* Fr. Smith — S, RW
131. *P. planifrons* Santschi — S
Generally nesting inside the forest.
132. *P. sauberi* Forel — G, R
133. *P. tandjongensis* Forel — RW, R
This species nested together with *O. rixosus*
134. *P. tsailuni* Wheeler — RW
135. *P. rinae* Emery — RW
136. *P. yeensis* Forel — S
Found in disturbed areas.
137. *P.* sp.eg-94 (=sp.10 of AMK, = sp. 13 of WJT) — S
138. *P.* sp.eg-101 (=sp.11 of AMK, = sp. of WJT) — S
139. *P.* sp.eg-111 (=sp.13 of AMK)
140. *Pheidologeton affinis* (Jerdon) — S, RW
Generally found in opened areas agree with that of Yamane (2003).
141. *P. diversus* (Jerdon) — S, G
Generally found in disturbed areas, rarely in primary forest.
142. *P. pygmaeus* Emery — RW
143. *P. silenus* (Fr. Smith) — S, G
144. *Proatta butteli* Forel — S, RW
145. *Recurvidris recurvispinosa* (Forel) — S
146. *Rhoptromyrmex* sp.1 of WJT — S, G
147. *Solenopsis geminata* (Fabricius) — S
This species is found in open areas near the head quarters.
148. *Strumigenys* sp.1 of WJT — RW
149. *S.* sp.2 of WJT — RW
150. *Tetramorium eleates* Forel — S
151. *T. lanuginosum* Mayr — S
152. *T. parvum* Bolton — L, S
153. *Vollenhovia fridae* (Fr. Smith) — RW
154. *V.* sp.1 of WJT (=sp.5 of AMK) — RW
155. *V.* sp.2 of WJT (=sp.3 of AMK) — RW

**Table 2** Summery of ant fauna in the Peninsular Botanical Garden (Khao Chong), Trang Province, Southern Thailand.

| subfamily | No. of genera | No. of spp. (identified: unidentified) |
|---|---|---|
| Dolichoderinae | 5 | 10 (8:2) |
| Formicinae | 11 | 33 (25:8) |
| Pseudomyrmecinae | 1 | 3 (3:0) |
| Cerapachyinae | 2 | 2 (1:1) |
| Aenictinae | 1 | 4 (3:1) |
| Dorylinae | 1 | 2 (2:0) |
| Leptanillinae | 1 | 1 (1:0) |
| Amblyoponinae | 2 | 2 (2:0) |
| Ponerinae | 12 | 31 (26:5) |
| Ectatomminae | 1 | 4 (3:1) |
| Poceratiinae | 2 | 2 (2:0) |
| Myemicinae | 21 | 61 (49:12) |
| Total | 60 | 155 (125:30) |

## Discussion

### Sampling methods and nesting sites

Ants were found everywhere in this botanical garden, from the forest floor up to canopy (Table 1). The number and composition of ant genera and species are somewhat different among samples collected by different sampling methods. For example, the ponerines usually live and nest in the sub-terrestrial site or in rotting wood (Table 1). In this case, the sifting technique gave the highest number for these ants. On the contrary, species inhabiting trees were hardly collected by this technique but collected rather by hand collecting. This information is in line with the result by Brühl *et al.*, (1998) who suggested that many of ground foraging ants rarely climb up trees, while many arboreal ants rarely forage on the ground. The choice of sampling methods is therefore very critical in determining ant's inventory (Hashimoto *et al.*, 2001). Yamane *et al.* (1996); Ito *et al.* (2001); Eguchi and Yamane (2003) used honey-baiting method to collect ants in their surveys. They found that some particular ants that forage on the ground also climb the tree trunks, but it was very rare to find canopy ants or ants with specific nesting sites on the tree coming down to the ground. The life of other species living in the rotting wood is also often confined inside the wood. For example in this study *Myopopone castanea* and *Cryptopone* sp.1 of WJT were never collected by the honey baiting method. In this study most the collectings were done for the soil, leaf litter, tree trunks, and lower vegetation, and canopy was rarely surveyed especially above 25 m in height. Thus the canopy ants were much fewer than in the studies by Tongjerm *et al.*, (2003) and Widodo *et al.*, (2004) who employed canopy fogging. In the most recent studies, Wiwatwitaya (2000); Ito *et al.* (2001) and Eguchi and Yamane (2003) used various methods in their samplings (Table 3). The results showed more diverse ant faunas probably because more kinds of habitat were covered and multiple sampling methods employed. All this suggests that several different sampling methods are necessary for the study of ant fauna in the tropics (Ito *et al.*, 2001).







**Figure 2-7** Some ants collected from Peninsular Botanical Garden (Khao Chong). 2. *Myopopone castanea* (Fr. Smith), 3. *Dorylus laevigatus* (Fr. Smith), 4. *Aenictus binghami* Forel, 5. *Acanthomyrmex ferox* Emery, 6. *Monomorium pharaonis* (Linnaeus), 7. *Pheidologeton affinis* (Jerdon).

**Table 3** Ant species diversity in several places in Southeast Asia. Abbreviations of sampling methods are as follows: Honey baiting (HB), soil and litter sifting (S), hand collecting (HC), colony collecting (CC), soil sampling (SS), canopy fogging (CF), litter sifting with Winkler bags (WB) and pitfall traps (PT).

| Locality | No. of spp./genera. | Methods | References |
|---|---|---|---|
| Peninsular Botanical Garden (Khao Chong) S. Thailand. (tropical lowland evergreen forest) | 155/60 | HC, CC, S | The present study |
| Lambir Hill NP. Sarawak, Borneo (tropical lowland dipterocarp forest) | 51/23 | HB | Yamane *et.,al.,* 1996 |
| Kinabalu NP., Sabah, Borneo (dipterocarp hill forest) | 524/73 | HB, WB, PT, CF, SF | Brühl *et al.,* 1998 |
| Merimbun, NW. Borneo (tropical lowland evergreen forest) | 162/52 | HB, HC, S, CC | Eguchi and Yamane, 2003 |
| Danum Valley Conservation, Sabah, Malaysia (tropical evergreen rainforest) | 169/32 | CF | Widodo *et al.,* 2004 |
| Bogor, W. Java (old botanical garden, lowland) | 216/61 | HB, HC, S, CC, PT | Ito *et al.,* 2001 |
| Tarutao (island tropical evergreen forest) | 61/29 | HC, S | Watanasit *et al.,* 2003 |
| Khao Yai, NE. Thailand (tropical evergreen forest) | 218/61 | HB, HC, S, SS | Wiwatwitaya, 2000 |
| Ton-Nga Chang S. Thailand (tropical evergreen forest) | 118/29 | CF | Tongjerm *et al.,* 2003 |
| Cuc Phung, N. Veitnam (subtropical lowland limestone forest) | 160/50 | - | Yamane *et al.,* 2002 |

In this study the author spent more time for sifting and colony searching while fewer days for hand collecting. Accordingly more than 70 % (123 species) of the total species from this botanical garden were found from the rotting logs, soil and leaf litter (Table 1). Material from hand collecting often included only minor workers that can not sometimes be identified at species level. As suggested by Ito *et al.* (2001) major (or larger) workers tend to have specific morphological characters in *Pheidole, Camponotus, Crematogaster* and *Oligomyrmex* compared with minor (smaller) workers. Therefore colony samples are much more useful as indicated by Eguchi (2001a; 2001b and 2001c) in taxonomic studies on Asian *Pheidole*.

Eighteen species that were found in disturbed sites around the head quarters rarely occurred in the primary forest. Among them some of those collected from the head quarter region were never found nesting inside the forest (*Meranoplus bicolor, Solenopsis geminata* and *Odontomachus simillimus).*

The present study revealed that the colony size (number of workers/colony) tends to be much smaller in large ants than in small and medium-sized ants. For example, the colonies of large-sized ponerines such as *Pachycondyla astuta, Diacamma rugosum,*etc. consisted of less than 30 individual workers, while colonies of medium- and small-sized species had more than 100 workers in their colony.

**Comparison with other forests in Southeast Asia**

The present study reported 155 species belonging to 60 genera in twelve subfamilies. The diversity of ant fauna in this botanical garden was similar to those in other tropical lowland forests. For example, Eguchi and Yamane (2003) found 162 species belonging to 52 genera in tropical lowland evergreen forest in Brunei, northwestern Borneo (Merimbun Heritage). The number of ant species found here was close to that in a subtropical lowland limestone forest (Cuc Phung National Park, North Vietnam) where 160 species in 50 genera were reported by Yamane *et al.* (2002), though species composition is different between the two. Andersen (2000) also mentioned the difference in species composition between tropical and subtropical regions. Yamane *et al.* (1996) collected only 51 species in a tropical lowland rainforest with a single method (honey baiting), while Brühl *et al.* (1998), employing various sampling methods, could collect much more species from a tropical hill forest, the number of collected species (524) being remarkably larger than in the present study.

There are a few reports on ant fauna in other parts of Thailand. For example Wiwatwitaya (2000) found 218 species belonging to 72 genera from several plant communities of Khao Yai National Park. Watanasit *et al.* (2003) reported 61 species in 29 genera in tropical evergreen forest from an archipelago (Tarutao National Park) in Thailand. The diversity of ants in this botanical garden was less than that in Khao Yai National Park because of the difference in sampling methods used and the area of study sites covered. Khao Yai is much more diverse in plant communities. Although Watanasit *et al.* (2003) gave a small number of species than the present study, this might be due to the longer time devoted to the fieldwork in the latter. Thus the direct comparison of species number among different surveys is not always so meaningful because of differences in sampling methods (Ito *et al.*, 2001), studied area and also time devoted.

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