

Ants from Mt. Mirŏk

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미륵산의 개미

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ABSTRACT

At the Mt. Mirŏk, Chŏnbug, Korea, ants have been collected from May, 1992 to April, 1998. Examining all the collections, they were classified as 25 species, 21 genera of 13 tribes under 3 subfamilies.

Key words : Ants, Formicidae, Systematics, Mt. Mirŏk, South Korea.

INTRODUCTION

Mt. Mireuk, altitude 430.2m is located at Iksan, Chŏnbug, from 5 minutes, 36 degrees of north latitude to 49 minutes, 126 degrees of east latitude. It is not only the mountain nearest to Iksan city, but also a popular place owing to Mirŏk temple site and museum. A lot of people love to visit here to see temple site which has a long history. Since the Mt. Mirŏk is surrounded by rice paddies and the vegetation principally consists of pine trees, which make soil acidic, it seems that the environments are not suitable to ants. Up to now we could not find any comment of ants in this area according to references. So we have carried out this research. About 250 ant nests were excavated in this area from 1992 to 1998. All the collections were identified under the

stereozoom-microscope, comparing with the voucher specimens from several foreign countries. Twenty five species are identified.

MATERIALS AND METHODS

All the materials for this paper were from the Mt. Mirŏk. As soon as they were collected, they were fixed in Bouin's alcoholic solution (80% ethanol 150ml, formaldehyde 15ml, and picric acid 1g), and transferred 2~3 days later to 85% ethanol. Dried specimens were examined microscopically, using the Wild M8 stereozoom-microscope, and identified in comparison with voucher specimens from Elmes and Collingwood in Great Britain, Onoyama in Japan, Rigato in Italy and Wang in China. Taxonomic keys were made following the system of Collingwood(1979).

The confirmed 25 species were listed in this paper including some informations of this area.

SYSTEMATIC ACCOUNT

Key to Subfamily of Formicidae

1. Pedicel with one nodal segment. -----2.
- Pedicel with two nodal segments.--Myrmicinae.
2. Gaster clearly constricted between first and second segments ; final abdominal segment with strong sting. -----Ponerinae.
- Gaster without constriction between first and second segment ; sting absent. ----Formicinae .

Subfamily 1. Ponerinae Lepeletier, 1835 침개미아과

Key to genera of Ponerinae

1. Dorsum of first and second segments of abdomen enlarged and seems to be curved like a hook. -----*Proceratium*.
- Dorsum of first and second segments of abdomen a little bit larger than ventral surface and not curved exceedingly. -----2.
2. In profile, pronotum and mesonotum convex. -----*Pachycondyla*.
- In profile, pronotum nearly flat. -----3.
3. Protrusion of ventral surface of petiole with convexed area. -----*Ponera*.
- Protrusion of ventral surface of petiole without convexed area. -----*Hypoconera*.

Tribe 1. Ponerini Lepeletier, 1835 : 185

침개미족

Type genus : *Ponera* Latreille, 1804.

Genus 1. *Pachycondyla* Smith, 1858 : 105

왕침개미속

Type species : *Formica crassinoda* 1802 : 198.

1. *Pachycondyla chinensis* (Emery, 1894) 왕침개미

Ponera chinensis chinensis Emery, 1894 : 460.

Brachyponera chinensis : Emery, 1909 : 367 ;

Kim, C. 1963 : 471 ; Collingwood, 1976 :

300 ; Terayama *et al.* 1992 : 23 ; Kim *et al.*

1993 : 119 ; Kim *et al.* 1994 : 294 ; Yu *et al.*

1994 : 255 ; Kim *et al.* 1995 : 102 ; Kim, 1996.

Pachycondyla chinensis : Brown, 1958 : 22 ;

Bolton, 1995 : 304.

Localities : Kyōngsōng, Suwon, Songnisan,

Chirisan, Sobaeksan, Hanrasan, Pusan,

Hansando, Hongdo, Gōjedo, Yōjudo, Chejudo.

Distribution : Korea, Japan.

2. *Pachycondyla javana* (Mayr, 1867) 일본침개미

Ectomomyrmex javanus Mayr, 1867 : 84 ; Kim,

C. 1970 : 472 ; Terayama *et al.* 1992 : 23 ;

Kim *et al.* 1993 : 119 ; Kim *et al.* 1994 :

295 ; Yu *et al.*, 1994 : 255 ; Kim *et al.* 1995 :

103 ; Kim *et al.* 1996 : 121 ; Kim, 1996.

Pachycondyla (Ectomomyrmex) japonica

Emery, 1902.

Pachycondyla japonicus : Wheeler, 1928 : ?

Localities : Kaesong, Kūmkangsan, Sōkwangsa,

Kyōngsōng, Suwon, Kanghwado, Sōraksan,

Songnisan, Chirisan, Sobaeksan, Woraksan,

Naejangsan, Hongdo, Hanrasan.

Distribution : Korea, Japan,

3. *Pachycondyla pilosior* (Wheeler, 1928)

털보장님침개미

Euponera (Trachymesopus) sharpi pilosior

Wheeler, 1928 : ?

Euponera (Trachymesopus) chosenensis

Teranishi, 1940 : ? ; Kim, C. 1963 : 342 ; Kim,

C. 1970 : 472 ; Kim, 1996.

Trachymesopus pilosior : Brown, 1963 : ? ;

Collingwood, 1976 : 300 ; Terayama *et al.*

1992 : 23 ; Kim *et al.* 1993 : 120 ; Kim *et al.*

1994 : 296 ; Yu *et al.* 1994 : 256.

Localities : Kaesōng, Pakyōnsan, Kūmgangsan,

Manmilsan.

Distribution : Korea, Japan.(Endemic species).

Genus 2. *Ponera* Latreille, 1804 : 179 침개미속

Type species : *Formica coarctata* Latreille,

1802 : 65.

4. *Ponera scabra* Wheeler, 1928 거치큰침개미
Ponera scabra Wheeler, 1928. ; Collingwood,
 1976 : 300 ; Terayama *et al.* 1992 : 24 ; Kim
et al. 1993 : 120 ; Yu *et al.* 1994 : 256.

Localities : Desangsan, Pyongan, Tedonggang,
 Kūmgangsan, Manmilsan, Kaesŏng, Pakyonsan,
 Pakyon Pokpo, Naejangsan.

Distribution: Korea, Japan,

Genus 3. *Hypoponera* Santschi, 1938 : 179

황침개미속

Type species : *Ponera abeillei* André 1881 : 61.

5. *Hypoconera sauteri* (Forel, 1912) 사우터침개미
Hypoconera gleadowi var. *sauteri* Forel, 1912.
Hypoconera nippona: Ogata, 1987.

Hypoconera sauteri ; Onoyama, 1989 : 7 ;
 Terayama *et al.* 1992 : 24 ; Kim *et al.*
 1993 : 119 ; Kim *et al.* 1994 : 295 ; Kim *et al.*
 1996 : 121 ; Kim, 1996.

Localities : Pyŏngyang, Sŏraksan, Kanghwado,
 Songnisan, Woraksan, Keryongsan, Chirisan,
 Sobaeksan, Namhaedo, Kŏjedo, Hanando,
 Chejudo.

Distribution : Korea, Japan, Formosa.

Genus 4. *Ponera* Latreille, 1804 : 179 침개미속

Type species : *Formica coarctata* Latreille,
 1802 : 65.

Tribe 2. Proceratiini Emery, 1895 : 765

배굽은침개미족

Type genus : *Proceratium* Roger, 1863 : 171.

Genus 5. *Proceratium* Roger, 1863 : 171

배굽은침개미속

Type species : *Proceratium silaceum* Roger,
 1863 : 172.

6. *Proceratium itoi* (Forel, 1918) 이토와세다침개미
Syspshincta itoi Forel, 1918 : 717 ; Ogata,
 1987 : 107.

Proceratium itoi ; Brown, 1958 : 247 ; Terayama
et al. 1992 : 22 ; Kim *et al.* 1993 : 120 ; Yu
et al. 1994 : 256 ; Kim, 1996.

Localities : Keryongsan, Pusan, Odongdo,

Chejudo.

Distribution : Korea, Japan

Subfamily 2. Myrmicinae Lepeletier, 1836

두마디개미아과

Key to Genera of Myrmicinae

1. Postpetiole attached to dorsum of first abdominal segment. ----- *Crematogaster*.
 --Postpetiole attached to anterior face of first segment.----- 2.
2. Midleg and hindleg with comb like spines.
 ----- *Myrmica*.
 --Midleg and hindleg with needle like spines-- 3.
3. Clypeus protruded like a tomb from anterior area of antennal base.----- *Pristomyrmex*
 --Clypeus not protruded like a tomb. ----- 4.
4. Clypeus with two vertical protruded lines. Head and thorax with concaved areas but without rugosities. ----- *Solenopsis*.
 --Clypeus with one vertical protruded line or rugosities. ----- 5.
5. Both sides of anterior face of pronotum angled in back view.----- *Tetramorium*.
 --Anterior face of pronotum round in back view. Body hairs thick to tip and look club. ----- 6.
6. Antennal club three segmented and as long as sum of other segments or longer than it.
 ----- *Pheidole*.
 --Antennal club five segmented and shorter than sum of other segments. ----- *Aphaenogaster*.

Tribe 3. Crematogastrini Forel, 1893 : 164

꼬리치레개미족

Type genus : *Crematogaster* Lund, 1831 : 132.

Genus 6. *Crematogaster* Lund, 1831 : 132

꼬리치레개미속

Type species : *Formica scutellaris* Oliver,
 1792 : 479.

7. *Crematogaster matsumurai vagula* Wheeler,
 1928 등굽은꼬리치레개미

Crematogaster matsumurai vagula Wheeler,

- 1928 : 110 ; Terayama *et al.* 1992 ; Kim *et al.* 1993 : 122 ; Kim *et al.* 1996 : 124 ; Kim, 1996.
- Crematogaster distans vanda* Borgmeier, 1929 : 209.
- Crematogaster brunnea ruginota* var. *vagula* : Santschi, 1930.
- Localities : Songnisan, Taech'õnsi, Woraksan, Sobaeksan, Naejangsan, Tolsando.
- Distribution : Korea, Japan.
- Tribe 4. Pheidolini Emery, 1877 : 72** 흑개미족
Type genus : *Pheidole* Westwood, 1839 : 219.
- Genus 7. Aphaenogaster Mayr, 1853 : 107**
장다리개미속
Type species : *Aphaenogaster sardoa* Mayr, 1853 : 107.
- 8. Aphaenogaster (Aphaenogaster) smithiesii**
Forel, 1911 일본장다리개미
Aphenogaster schmitzi japonica Forel, 1911 : 267.
Aphaenogaster (Attomyrma) syrica japonca : Emery, 1921.
Aphaenogaster (Attomyrma) smythiesi japonica : Wheeler, W. M. 1928 : 101 ; Terayam *et al.* 1992 : 26 ; Kim *et al.* 1993 : 122 ; Yu *et al.* 1994 : 256 ; Kim *et al.* 1996 : 122.
Aphaenogaster japonica : Choi *et al.* 1985 : ? ; Kim, 1996.
Localities : Sõraksan, Kanghwado, Kyongsõng, Songnisan, Woraksan, Keryongsan, Naejangsan, Sobakesan, Pusan, Hongdo, Hansando, Kõjedo, Hanllasan.
Distribution : Korea, Japan, China.
- Genus 8. Pheidole Westwood, 1839 : 219.**
흑개미속
Type species : *Atta providens* Sykes, 1835 : 103.
- 9. Pheidole fervida Fr. Smith, 1874** 극동흑개미
Pheidole fervida Fr. Smith, 1874 : 406 ; Forel, 1900 : 285 ; Teranishi, 1940 : 4 ; Ogata, 1982 : 195 ; Imai, 1966 : 119 ; Kim, 1996.
Pheidole fervida var. *kwazana* Teranishi, 1940 : ? ; Kupyanskaya, 1990 : 124.
Pheidole fervida : Kim, 1963 : 344 ; Kim, 1970 : 477 ; Collingwood, 1976 : 302 ; Kim & Kim, 1983 : 71 ; Terayama *et al.* 1992 : 27 ; Kim *et al.* 1993 : 124 ; Kim *et al.* 1994 : 299 ; Yu *et al.* 1994 : 257 ; Park, 1995 : 49 ; Kim *et al.* 1995 : 105 ; Kim *et al.* 1996 : 122.
Localities : Kaesõng, Pakyon Pokpo, Sagampo, Kũmgangsan, Pyõngyang, Sõkwangsa, Kanghwado, Sõraksan, Seoul, Songnisan, Woraksan, Keryongsan, Chirisan, Namhaedo, Gõjedo, Naejangsan, Odongdo, Yokchido, Hansnado, Hanllasan.
Distribution : Korea, Japan.
- Tribe 5. Solenopsidini Forel, 1893 : 164** 마디개미족
Type genus : *Solenopsis* Westwood, 1840 : 86.
- Genus 9. Monomorium Mayr, 1855** 집개미속
Type species : *Monomorium minutum* Mayr, 1855 : 453.
- 10. Monomorium floricola Jerdon, 1893**
검정꼬마개미
Atta floricola Jerdon, 1851 : 107 ; Forel, 1893 : 388 ; Wheeler, W. M. 1905 : 88 ; Donisthorpe, 1914 : 136.
Monomorium floricola : Mayr, 1879 : 671 ; Kim & Kim, 1983 : 65 ; Kim *et al.* 1993 : 123 ; Yu *et al.* 1994 : 256 ; Kim, 1996.
Localities : Sinjido.
Distribution : Korea, Taiwan, Japan, India.
- Genus 10. Solenopsis Westwood, 1840 : 86**
열마디개미속
Type species : *Solenopsis mandibularis* Westwood, 1840 : 87.
- 11. Solenopsis japonica Wheeler, 1928**
일본열마디개미
Solenopsis fugax var. *japonica* Wheeler, 1928 : 113 ; Santschi, 1934 : 585.

Solenopsis japonica : Collingwood, 1976 : 303 ;
Kupyanskaya, 1990 : 133 ; Ogata, 1991 :
110 ; Terayama *et al.* 1992 : 30 ; Kim *et al.*
1993 : 125 ; Kim *et al.* 1994 : 300 ; Yu *et al.*
1994 : 257 ; Kim *et al.* 1995 : 105 ; Kim *et al.*
1996 : 123 ; Kim, 1996.

Localities : Kŭmgangsan, Kaesŏng, Pakyonsan,
Sŏraksan, Ch'oonsŏnggun Sinbukmyon,
Kanghwado, Seoul, Woraksan, Songnisan,
Keryongsan, Naejangsan, Sobaeksan,
Odongdo, Namhaedo, Sarangdo, Hansando,
Hongdo, Kŏjedo, Hongdo, Chejudo.

Distribution : Korea, Japan.

Genus 11. *Pristomyrmex* Mayr, 1866 : 903

그물둥개미속

Type species : *Pristomyrmex pungens* Mayr,
1866 : 904.

12. *Pristomyrmex pungens* Mayr, 1866

그물둥개미

Pristomyrmex pungens Mayr, 1866 : 904.

Pristomyrmex pungens : Kim, 1963 : 103 ; Kim,
1970 : 481 ; Collingwood, 1976 : 303 ;
Collingwood, 1981 : 27 ; Kim & Kim, 1982 :
101 ; Kim & Kim, 1983 : 58 ; Terayama *et al.*,
1992 ; Kim *et al.* 1993 : 125 ; Kim *et al.*
1994 : 299 ; Yu *et al.* 1994 : 257 ; Kim *et al.*
1995 : 105 ; Kim *et al.* 1996 : 124 ; Kim, 1996.

Localities : Kŭmgangsan, Sŏraksan, Seoul,
Suwon, Yangjugun Kyohyŏnri, Kwangjugun
Pungsanri, Chiaksan Kuryongsa, Naejangsan,
Chirisan Chŏgsanri, Chejudo.

Distribution : Korea, Japan, China.

Tribe 6. Myrmecini Emery 1877 : 71 빨개미족

Type genus : *Myrmecina* Curtis, 1829 : 265.

Genus 12. *Myrmica* Latreille, 1804 : 179 빨개미속

Type species : *Formica rubra* Latreille,
1758 : 580.

13. *Myrmica kurokii* Forel, 1907 쿠로키빨개미

Myrmica rubra kurokii Forel, 1907 : 18.

Myrmica kurokii Forel : Emery, 1908 : 171 ;
Weber, 1947 : 469 ; Collingwood, 1976 : 301 ;
Collingwood, 1981 : 26 ; Kim & Kim, 1983 :
56 ; Terayama *et al.* 1992 : 25 ; Yu *et al.*
1994 : 257 ; Kim *et al.* 1996 : 122 ; Kim, 1996.

Localities : Ryanggang Paektusan (1900m), Sŏraksan,
Hongchŏngun Kebangsan, Sobaeksan,
Naejangsan.

Distribution : Korea, Japan.

Tribe 7. Dacetini Forel, 1892 : 344 독침개미족

Type genus : *Daceton* Perty, 1833 : 136.

Genus 13. *Strumigenys* Smith, 1860 : 72

비늘개미속

Type species : *Strumigenys mandibularis*
Smith, 1860 : 72.

14. *Strumigenys lewisi* Cameron, 1866 비늘개미

Strumigenys lewisi Cameron, 1866 : 229.

Strumigenys godeffroyi var. *lewisi* : Mayr,
1887 : 569 ; Wheeler, W.M. 1906 : 318 ;
Teranishi, 1940 : 5 ; Kim, 1963 : 345 ; Kim,
1970 : 483 ; Kim & Kim, 1983 : 60.

Strumigenys lewisi : Bingham, 1903 : 149 ;
Collingwood, 1976 : 303 ; Terayama *et al.*
1992 : 30 ; Kim *et al.* 1993 : 126 ; Kim *et al.*
1994 : 300 ; Yu *et al.* 1994 : 257 ; Kim *et al.*
1995 : 105 ; Kim *et al.* 1996 : 124 ; Kim, 1996.

Localities : Kŭmgangsan, Pakyonsan, Dehungsol
near Pakyon Pokpo, Kanghwado, Songnisan,
Keryongsan, Naejangsan, Chindo, Hansando,
Kŏjedo, Namhaedo, Hongdo, Taehŭksando,
Chejudo.

Distribution : Korea, Japan.

Tribe 8. Tetramorini Emery, 1895 : 770

주름개미족

Type genus : *Tetramorium* Mayr, 1855 : 423.

Genus 14. *Tetramorium* Mayr, 1855 : 423

주름개미속

Type species. *Formica caespitum* Linnaeus,
1758 : 581.

15. *Tetramorium caespitum* (Linnaeus, 1758)

주름개미

Formica caespitum Linnaeus, 1758 : 581.*Tetramorium caespitum* : Mayr, 1855 : 426.*Tetramorium caespitum semileve* var. *jacoti* Wheeler, 1923 : ? (syn. by Yasumatsu, 1962).*Tetramorium caespitum* : Teranish, 1940 : 18 ; Kim, 1963 : 345 ; Kim, 1970 : 482 ; Collingwood, 1976 : 304 ; Collingwood, 1981 : 27 ; Kim & Kim, 1982 : 102 ; Kim & Kim, 1983 : 67 ; Terayama *et al.* 1992 : 28 ; Kim *et al.* 1993 : 126 ; Kim *et al.* 1994 : 300 ; Yu *et al.* 1994 : 257 ; Kim *et al.* 1995 : 106 ; Kim *et al.* 1996 : 123 ; Kim, 1996.

Localities : Pyöngyangsi, Nüngrado, Pakyonsan, Pakyon Pokpo, Sanchontong, Wonsan, Sisungho, Kūmgangsan, Chann Pay plateau, Samziyan, Naejangsan, Söraksan, Hoingsönggun Kapchönmöyön, Hongchön, Chöonchön, Chiaksan, Dokgosan, Seoul, Suwon, Woraksan, Songnisan, Keryongsan, Moaksan, Chirisan, Kayasan, Sunchönsi, Chokyesan, Odongdo, Mungapdo, Namhaedo, Hanllasan.

Distribution : Cosmopolitan.

Tribe 9. *Metaponini* Forel, 1911 : 447

메타폰개미족

Type genus : *Metapone* Forel, 1911 : 447.Genus 15. *Vollenhovia* Mayr, 1865

에메리개미속

Type species : *Vollenhovia punctatastriata* Mayr, 1865.16. *Vollenhovia emeri chosenica* Wheeler, 1928

에메리개미

Vollenhovia emeri chosenica Wheeler, 1928 : 113 ; Terayama *et al.* 1992 : 29 ; Kim *et al.* 1993 : 126 ; Kim, 1996.*Vollenhovia emery* Wheeler, 1906 : 312 ; Kim, 1963 : 348 ; Kim, 1970 : 491 ; Kim & Kim, 1983 : 62 ; Yu *et al.* 1994 : 257 ; Kim *et al.* 1996 : 123.

Localities : Kanghaiwado, Woraksan, Songnisan,

Keryongsan, Chirisan, Naejangsan, Namhaedo, Hansando, Dolsando, Köjedo, Hanllasan, Chejudo.

Distribution : Korea.

Subfamily 3. *Formicinae* Latreille, 1809

불개미아과

Type genus : *Formica* Linnaeus 1758 : 579.Key to Genera of *Formicinae*

1. Antennal insertions set at a distance behind posterior clypeal margin. ----- *Camponotus*.
- Antennal insertions more or less contiguous with posterior clypeal margin. ----- 2.
2. Eyes at or in front of mid-length of sides of head ; petiole inclined forward, petiole nodal or scale form and overhung by first gaster tergite. ----- *Paratrechina*.
- Eyes behind mid-length of sides head : petiole nodal or vertical scale not over-hung by first gaster. ----- 3.
3. Propodeal spiracle ellipsoid or slitlike set at a distance from posterior propodeal declivity. Funiculus segments from two to five or longer than segments from six to eleven. ----- *Formica*.
- Propodeal spiracle broadly oval or circular, set close to or at the posterior propodeal margin. ----- *Lasius*.

Tribe 10. *Camponotini* Forel, 1878 : 374

왕개미족

Type genus : *Camponotus* Mayr, 1861 : 35.Genus 16. *Camponotus* Mayr, 1861 : 35

왕개미속

Type species : *Formica ligniperda* Latreille, 1802 : 88.17. *Camponotus japonicus* Mayr, 1866 일본왕개미*Camponotus japonicus* Mayr, 1866 : 885.*Camponotus pennsylvanicus* var. *japonicus* Forel, 1879 : 56.*Camponotus herculeanus japonicus* : Emery, 1908 : 186 ; Teranishi, 1940 : 6 ; Kim, 1963 :

346.

Camponotus japonicus : Bingham, 1903 : 390 ;
Kim 1970 : 484 ; Collingwood, 1976 : 307 ;
Collingwood, 1981 : 29 ; Kim, 1987 : 13 ;
Terayama *et al.* 1992 : 38 ; Kim *et al.*
1993 : 127 ; Kim *et al.* 1994 : 301 ; Yu *et al.*
1994 : 257 ; Kim *et al.* 1995 : 106 ; Kim *et al.*
1996 : 127 ; Kim, 1996.

Localities : Desangsan, Lyongaksan, Sagam,
Changlyongsan, Pyŏngyang, Nūngrado,
Bongwari, Zamosan, Nampo, Guksangbong
mountain [Pyongannamdo], Pakyŏnsan, Pakyŏn
Pokpo, Sŏraksan, Kanghwado, Suwon,
Taechŏnsi, Songnisan, Woraksan, Keryongsan,
Naejangsan, Sobaeksan, Pusan, Chinhae,
Choongmu, Namhaedo, Kŏjedo, Sarangdo,
Yokjido Maemuldo, Odongdo.

Distribution : Korea, Japan, China, Siberia,
Philiphine, Burma.

18. *Camponotus jejuensis* Kim & Kim, 1986

한라왕개미

Camponotus jejuensis Kim & Kim, 1986 : 140.
Camponotus jejuensis ; Kim, 1987 : 17 ;
Terayama *et al.* 1992 : 39 ; Kim *et al.*
1993 : 127 ; Kim *et al.* 1994 : 301 ; Kim *et al.*
1995 : 107 ; Kim *et al.* 1996 : 127 ; Yu *et al.*
1994 : 257 ; Kim, 1996.

Localities : Chejudo Sanbanggulsu, Paekyangsa,
Hŭksando, Ssanggyesa.

Distribution : Korea.

19. *Camponotus quadrinotatus* Forel, 1886

네눈개미

Camponotus marginatus var. *quadrinotatus*
Forel, 1886 : 142.

Camponotus (Myrmentoma) caryae var.
quadrinotatus : Emery, 1925 : 118 ; Kim,
1963 : 346 ; Kim, 1970 : 482.

Camponotus (Myrmentoma) fallax quadrinotatus :
Forel, 1907 : 19.

Camponotus quadrinotatus ; Teranishi, 1940 :
6 ; Collingwood, 1976 : 307 ; Collingwood,

1981 : 29 ; Wang, Xio & Wu, 1989 : 327 ;
Terayama *et al.* 1992 : 38 ; Kim *et al.*
1993 : 127 ; Yu *et al.* 1994 : 257 ; Kim *et al.*
1996 : 127 ; Kim, 1996.

Localities : Pyŏngannamdo Zamosan, Kaesong
Pakyonsan, Pakyon Pokpo, Naejangsan.

Distribution : Korea, Japan, China.

Genus 17. *Polyrachis* Smith, 1857 : 58

가시개미속

Type species : *Formica bihamata* Drury,
1773 : 73.

20. *Polyrachis (s. str.) lamellidens* Smith, 1874

가시개미

Polyrachis lamellidens Smith, 1874 : 403 ;
Donisthorpe, 1937 : 628 ; Teranishi, 1940 : 6 ;
Kohriba, 1963 : 200 ; Kim, 1963 : 356 ; Kim,
1970 : 485 ; Hung, 1970 : 29 ; Collingwood,
1976 : 307 ; Kim, 1987 : 77 ; Terayama *et al.*
1992 : 40 ; Kim *et al.* 1993 : 130 ; Yu *et al.*
1994 : 258 ; Kim, 1996.

Localities : Myohyangsan, Pyŏngannamdo
Lyongaksan, Kanghwado, Hwasan, Seoul,
Songnisan, Woraksan, Keryongsan,
Sobaeksan, Chirisan, Chejudo.

Distribution : Korea, Japan.

Tribe 11. Formicini Latreille, 1809 : 124

불개미족

Type genus : *Formica* Linnaeus, 1758 : 579.

Genus 18. *Formica* Linnaeus 1758 : 579

불개미속

Type species : *Formica rufa* Linnaeus, 1761 :
426.

21. *Formica japonica* Motschulsky, 1866 곰개미

Formica japonica Motschulsky, 1866 : 183.

Formica fusca var. *japonica* : Emery, 1909 :
197 ; Teranishi, 1940 : 6.

Formica fusca japonica : Emery, 1925 : 247 ;
Kim, 1963 : 347 ; Kim, 1970 : 489.

Formica japonica Dlussky, 1967 : 58 ;
Collingwood, 1976 : 305 ; Collingwood, 1981 :

27 ; Kim, 1987 : 35 ; Terayama *et al.* 1992 : 37 ; Kim *et al.* 1993 : 128 ; Kim & Park, 1994 : 133 ; Kim *et al.* 1994 : 303 ; Yu *et al.* 1994 : 257 ; Kim *et al.* 1995 : 106 ; Kim *et al.* 1996 : 126 ; Kim, 1996.

Localities : Mangyongdae, Desangsan, Nampo, Lyongaksan, Zamosan, Channpay plateau, Samziyan, Pakyonsan, Pakyon pokppo, Kūmgangsan, Sōraksan, Kanghwado, Hongchōn, Seoul, Daechon city, Woraksan, Songnisan, Keryongsan, Chirisan, Paekyangsa, Naejangsan, Sobaeksan, Chinhae, Pusan, Choongmu, Sarangdo, Gōmundo, Yokjido, Hansando, Namhaedo, Maemuldo, Hanrasan, Chejudo.

Distribution : Korea, Japan.

Tribe 12. Lasiini Ashmead, 1905 : 384

풀잎개미족

Type genus : *Lasius* Fàbricius, 1804 : 415.

Genus 19. *Lasius* Fàbricius, 1804 : 415

풀잎개미속

Type species : *Formica nigra* Linnaeus 1758 : 580.

22. *Lasius* (s.str.) *alienus* (Förster, 1850)

누운털개미

Formica aliena Färster, 1850 : 36.

Lasius alienus : Mayr, 1861 : 49 ; Collingwood, 1976 : 305 ; Collingwood, 1981 : 27 ; Kim, 1987 : 46 ; Terayama *et al.* 1992 : 35 ; Kim *et al.* 1993 : 129 ; Kim, & Lim, 1994 : 119 ; Kim *et al.* 1994 : 302 ; Kim *et al.* 1995 : 107 ; Yu *et al.* 1994 : 258 ; Kim *et al.* 1996 : 126 ; Kim, 1996.

Lasius niger var. *alieno-niger* Forel, 1874 : 46.

Localities : Sagam, Pyongyangsi, Pakyonsan [Pyongannamdo], Kaesōng Pakyon Pokpo.

Distribution : Korea, Japan, China, Europe.

23. *Lasius niger* Linnaneus, 1758 고동털개미

Formica niger Linnaneus, 1758 : 580.

Lasius niger : Fàbricius, 1804 : 415 ; Teranishi, 1940 : 20 ; Kim, 1963 : 347 ; Kim, 1970 :

488 ; Collingwood, 1976 : 305 ; Collingwood, 1981 : 27 ; Kim, 1987 : 59 ; Collingwood, 1981 : 27 ; Kim, 1987 : 59 ; Terayama *et al.* 1992 : 35 ; Kim *et al.* 1993 : 129 ; Kim, & Lim, 1994 : 120 ; Kim *et al.* 1994 : 302 ; Yu *et al.* 1994 : 258 ; Kim *et al.* 1995 : 109 ; Kim, 1996.

Localities : Ryanggang, Kangwon-Kaesong provinces, Paekyangsa, Sangwangbong.

Distribution : Korea, Japan, Sahalin, China, Siberia, Europe, North America.

24. *Lasius* (*Cautholasius*) *talpa* Wilson, 1955

두더지털개미

Lasius (*Cautholasius*) *talpa* Wilson, 1955 : 136 ; Imai, 1966 : 19 ; Collingwood, 1976 : 136 ; Kim, 1987 : 65 ; Terayama *et al.* 1992 : 35 ; Kim *et al.* 1994 : 302 ; Yu *et al.* 1994 : 258 ; Kim *et al.* 1996 : 126 ; Kim, 1996.

Localities : South Pyongan[North Korea], Suwon, Woraksan, Songnisan, Keryongsan, Sobaeksan, Sarangdo.

Distribution : Korea, Japan.

Tribe 13. Plagiolepidini Forel, 1886 : 212

루리개미족

Type genus : *Plagiolepis* Mayr, 1861 : 42.

Genus 20. *Plagiolepis* Mayr, 1861 : 42

루리개미속

Type species : *Formica pygmaea* Latreille, 1798 : 45

25. *Plagiolepis pygmae* (Latreille, 1798) 남색개미

Formica pygmaea Latreille, 1798 : 45.

Plagiolepis pygmae : Mayr, 1861 : 43 ; Teranishi, 1940 : 5 ; Kim, 1963 : 348 ; Kim, 1970 : 491 ; Kim, 1987 : 74 ; Terayama *et al.* 1992 : 34 ; Kim *et al.* 1993 : 130 ; Kim *et al.* 1994 : 303 ; Yu *et al.* 1994 : 258 ; Kim *et al.* 1996 : 125 ; Kim, 1996.

Localities : Seoul Sihūngdong, Kanghwado, Aengmubong, Sihūnggun Songhwadong, Tōkyusan, Naeyōnsan.

Distribution : Korea, Japan.

요 약

저자들은 1992년 5월부터 1998년 4월까지 미륵산을 대상으로 개미류를 채집하였다. 채집된 모든 표본을 보증표본들과 비교하여 동정한 결과 3아과, 13속, 20속, 25종이 이 지역에서 서식하는 것으로 확인되었다.

검색어 : 개미, 분류, 미륵산, 대한민국

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