

## Faunal List of Oribatid Mites (Acari : Oribatida) at the 44th (deciduous) and 45th (coniferous) compartment in Kwangreung, Korea

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### 광릉지역의 날개응애(Acari : Oribatida) 목록 : 44임반(활엽수림)과 45임반(침엽수림)을 중심으로

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### ABSTRACT

A total of 101 species belonging to 76 genera under 42 families in Kwangreung coniferous forest (45th compartment) and 108 species belonging to 69 genera under 40 families in Kwangreung deciduous forest (44th compartment) was reported, respectively.

**Key words :** Oribatida, coniferous forest, deciduous forest, Kwangreung, Korea

### INTRODUCTION

The morphologically highly diverse oribatid mites constitute the richest order in the subclass Acari. They belong to the most important terrestrial arthropodan groups for their enormous numbers and the varieties of species. Also their activity might be of decisive importance in the

life of the soil and the processes of energy turnover (Wallwork, 1976). The oribatid mite has been considered to be with the category of suborder until lately, but now is generally accepted as order Oribatida (Wolley, 1988; Fujikawa, 1991; Evans, 1992; Fyjikawa et al., 1993). Most taxonomic studies of Oribatida in Korea have been conducted by Choi (1985, 1986a, 1986b, 1986d, 1988, 1989, 1994) but ecological

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studies are rare. Species diversity of oribatid mites in Kwangreung, which is located in the northern suburban area near Seoul and is relatively well protected from human activity and environmental stress, was reported by Choi (1984, 1996). Here, we report the result of two years investigation on oribatid mites from 1993 to 1994 at Kwangreung coniferous (45th compartment) and deciduous (44th compartment) forests.

## SYSTEMATICS

### SUBCLASS ACARI SUPERORDER ACTINOTRICHIDA ORDER ORIBATIDA

#### I. Oribatid mites in Kwangreung coniferous forest

Family Mesoplophoridae Ewing, 1917

어리조개응애과

*Archoplophora* sp.

Family Hypochthoniidae Berlese, 1910 띠응애과

*Eohypochthonius crassisetiger* Aoki, 1959

*Hypochthonius rufulus* Koch, 1836

Family Lomanniidae Berlese, 1916 팽이응애과

*Lohmannia coreana* Choi, 1985

*Mixacarus exilis* Aoki, 1970

*Vepracarus hirsutus* Aoki, 1961

Family Epilohmanniidae Oudemans, 1916

배흙응애과

*Epilohmannia pallida pacifica* Aoki, 1970

Family Phthiracaridae Perty, 1841 조개응애과

*Phthiracarus clemens* Aoki, 1963

Family Steganacaridae Niedbala, 1986

가시조개응애과

*Atropacarus (Atropacarus) striculus* (Koch, 1836)

*Hoplophthiracarus* sp.

Family Euphthiracaridae Jacot, 1930

배꼽조개응애과

*Euphthiracarus* sp.

*Microtritia minima* (Berlese, 1904[1905])

*Rhysotritia ardua* (Koch, 1841)

Family Oribotritiidae Grandjean, 1953(1954)

방패응애과

*Protoribotritia ensifer* Aoki, 1969

Family Camisiidae Oudemans, 1900

*Camisia segnis* (Hermann, 1804)

*C. lapponica* (Tr g rdh, 1910)

*Heminothrus* sp.

*Platynothrus yamasakii* (Aoki, 1958)

Family Malaconothridae Berlese, 1916

장님응애과

*Malaconothrus japonicus* Aoki, 1966

*M. pygmaeus* Aoki, 1969

*Trimalaconothrus* sp.

Family Nothridae Berlese, 1896 그물왕응애과

*Nothrus* sp.

*N.* sp.1

Family Trhypochthoniidae Willmannm, 1931

쌍무늬응애과

*Trhypochthonius tectorum* (Berlese, 1896)

Family Nanhermanniidae Sellnick, 1928

해면응애과

*Nanhermannia bifurcata* Fujikawa, 1990

*N.* sp.

*Nippohermannia parallela* (Aoki, 1961)

Family Gymnodamaeidae Grandjean, 1954

아교응애과

*Allodamaeus decemsetiger* Choi et Aoki, 1988

Family Damaeidae Berlese, 1896 빨염주응애과

*Epidamaeus coreanus* (Aoki, 1966)

*E.* sp.

*Tectodamaeus armatus* Aoki, 1984

*T.* *striatus* Enami et Aoki, 1988

Family Damaeolidae Grandjean, 1965

*Fosseremus quadripertitus* Grandjean, 1965

- Costeremaeus ornatus* Aoki, 1970  
 Family Eremobelbidae Balogh, 1961 귀용애과  
*Eremobelba japonica* Aoki, 1959  
 Family Eremulidae Grandjean, 1965  
 동아줄용애과  
*Eremulus avenifer* Berlese, 1913  
 Family Eremaeidae Sellnick, 1928  
 다리차양용애과  
*Eremaeus tenuisetiger* Aoki, 1970  
 Family Astegistidae Balogh, 1961 달마용애과  
*Cultroribula lata* Aoki, 1961  
*C. tridentata* Aoki, 1965  
 Family Gustaviidae Oudemans, 1900  
 싯툽용애과  
*Gustavia microcephala* (Nicolet, 1855)  
 Family Liacaridae Sellnick, 1928 달갈용애과  
*Liacarus contiguus* Aoki, 1969  
*L. flammeus* Aoki, 1967  
*L. kilchini* Choi, 1985  
*L. orthogonios* Aoki, 1959  
 Family Metrioppiidae Balogh, 1943  
 뜯지개용애과  
*Ceratoppia bipilis* (Hermann, 1804)  
 Family Carabodidae Koch, 1842 왕용애과  
*Carabodes peniculatus* Aoki, 1970  
*C. rimosus* Aoki, 1959  
 Family Otocephidae Balogh, 1961  
 오징어용애과  
*Dolicheremaeus elongatus* Aoki, 1967  
*Fissicepheus clavatus* (Aoki, 1959)  
*F. coronarius* Aoki, 1967  
*F. haradai* Choi, 1986  
*Trichotocephus erabuensis* Aoki, 1965  
 Family Tectocephidae Grandjean, 1953(1954)  
 사각머리용애과  
*Tectocephus velatus* (Michael, 1880)  
*T.* *cuspidentatus* Knülle, 1954  
 Family Autognetidae Grandjean, 1960  
 철로용애과  
*Autogneta masahitoi* Aoki, 1963  
 Family Oppiidae Grandjean, 1951 좁쌀용애과  
*Arcoppia arcualis* (Aoki, 1959)  
*Brachioppiella ctenifera barbata* Choi, 1986  
*Lasiobelba* sp.  
*Lauropopia neerlandica* (Oudemans, 1900)  
*Machuella ventrisetosus* Hammer, 1961  
*Oppia minutissima* Sellnick, 1950  
*O. sagami* Aoki, 1984  
*O.* sp.  
*O.* sp.1  
*O.* sp.2  
*O.* sp.3  
*O.* sp.4  
*O.* sp.5  
*Oppiella nova* (Oudemans, 1902)  
*Quadroppia quadricarinata* (Michael, 1885)  
*Ramusella (Ramusella) sengbuschi* Hammer, 1968  
 Family Suctobelbidae Jacot, 1938 유리창용애과  
*Flagrosuctobelba naginata* (Aoki, 1961)  
*Suctobelbella yezoensis* Fujikawa et Fujita, 1987  
*Suctobelbula tuberculata* Aoki, 1970  
 Family Licneremaeidae Grandjean, 1953  
 두꺼비날개용애과  
*Licneremaeus* sp.  
 Family Haplozetidae Grandjean, 1936  
 소매용애과  
*Incabates* sp.  
*Peloribates longisetosus* (Willmann, 1930)  
*Rostrozetes ovulum* (Berlese, 1908)  
 Family Protoribatidae Balogh et Balogh, 1984  
 긴소매용애과  
*Protoribates crassisetiger* Choi, 1986  
 Family Hemileidae Balogh et Balogh, 1984  
*Tuberemaeus singularis* Sellnick, 1930

Family Oripodidae Jacot, 1925 뚜껍응애과  
*Oripoda pinicola* Aoki et Ohkubo, 1974  
*Truncopes* sp.

Family Parakalumidae Grandjean, 1936  
 주머니나비응애과  
*Neoribates* sp.  
*Protokalumma* sp.

Family Scheloribatidae Grandjean, 1933  
 판날개응애과  
*Scheloribates latipes* (Koch, 1841)  
 S. *rigidisetosus* Willmann, 1951  
 S. sp.  
 S. sp.1

Family Xylobatidae Balogh et Balogh, 1984  
 도포소매응애과  
*Xylobates* sp.  
*Perxylobates* sp.

Family Ceratozetidae Jacot, 1925 잔날개응애과  
*Ceratozetella imperatoria* (Aoki, 1963)  
*Ceratozetes* sp.  
*Boreozetes* sp.

Family Chamobatidae Thor, 1937  
*Chamobates* sp.

Family Mycobatidae Grandjean, 1953  
 사다리응애과  
*Punctoribates punctum* (Koch, 1839) Family

Achipteriidae Thor, 1929 뽕족날개응애과  
*Achipteria* sp.  
*Anachipteria grandis* Aoki, 1961  
*Parachipteria distincta* (Aoki, 1959)

Family Galumnidae Jacot, 1925 나비응애과  
*Pergalumna altera* (Oudemans, 1915)  
 P. *magnipora* Aoki, 1961  
*Trichogalumna lineata* Okubo, 1984

#### II. Oribatid mites in Kwangreung deciduous forest

Family Steganacaridae Niedbala, 1986

가시조개응애과  
*Atropacarus* (*Atropacarus*) *striculus* (Koch, 1836)  
*Hoplophorella* sp.

Family Euphthiracaridae Jacot, 1930  
 배꼽조개응애과  
*Euphthiracarus foveolatus* Aoki, 1980  
*Microtritia minima* (Berlese, 1904[1905])  
*Rhysotritia ardua* (Koch, 1841)

Family Hypochthoniidae Berlese, 1910 띠응애과  
*Eohypochthonius crassisetiger* Aoki, 1959  
*Hypochthonius rufulus* Koch, 1836

Family Cosmochthoniidae Grandjean, 1945  
 긴털띠응애과  
*Cosmochthonius reticulatus* Grandjean 1947

Family Lomanniidae Berlese, 1916 팽이응애과  
*Lohmannia coreana* Choi, 1985  
*Mixacarus exilis* Aoki, 1970  
*Vepracarus hirsutus* Aoki, 1965

Family Eulohmanniidae Oudemans, 1916  
 유령응애과  
*Eulohmannia ribagai* Berlese, 1910

Family Perlohmanniidae Grandjean, 1958  
 장수응애과  
*Apolohmannia gigantea* Aoki, 1960

Family Epilohmanniidae Oudemans, 1923  
 배흙응애과  
*Epilohmania pallida pacifica* Aoki, 1970  
 E. sp.

Family Camisiidae Oudemans, 1920 왕응애과  
*Camisia segnis* (Hermann, 1804)  
 C. *spinifer* (Koch 1836)  
*Heminothrus minor* Aoki, 1969.  
 H. sp.

Family Malaconothridae Berlese, 1916  
 장님응애과  
*Malaconothrus japonicus* Aoki, 1966  
 M. *pygmaeus* Aoki, 1969

*Trimalaconothrus joonsooi* Choi, 1986

Family Nothridae Berlese, 1896 그물왕응애과

*Nothrus biciliatus* Koch, 1844

*N.* sp.

Family Trhypochthoniidae Willmann, 1931

쌍무늬응애과

*Trhypochthonius tectorum* (Berlese, 1896)

*T.* *japonicus* Aoki, 1970

Family Nanhermanniidae Sellnick, 1928

해면응애과

*Nanhermannia nana* (Nicolet, 1855)

*Nippohermania parallela* (Aoki, 1961)

Family Gymnodamaeidae Grandjean, 1954

아교응애과

*Allodamaeus decemsetiger* Choi et Aoki, 1985

*A.* *transitus* Aoki, 1984

Family Damaeidae Berlese, 1896 빨염주응애과

*Damaeus* sp.1

*D.* sp.2

*D.* sp.3

*D.* sp.4

*D.* sp.5

*D.* sp.6

Family Damaeolidae Grandjean, 1965

*Fosseremus* sp.

*Costeremaeus ornatus* Aoki, 1970

Family Eremobelbidae Balogh, 1961 귀응애과

*Eremobelba japonica* Aoki, 1959

Family Eremaeidae Sellnick, 1928

다리차양응애과

*Eremaeus orientalis* Golosova, 1970

*E.* *tenuisetiger* Aoki, 1979

Family Zetorchestidae Michael, 1898

*Zetorchestes* sp.

Family Astegistidae Balogh, 1961 달마응애과

*Cultroribula breviclavata* Aoki, 1984

*C.* *lata* Aoki, 1961

*C.* *tridentata* Aoki, 1965

Family Gustaviidae Oudemans, 1900

실톱응애과

*Gustavia microcephala* (Nicolet, 1855)

Family Liacaridae Sellnick, 1928 달갈응애과

*Liacarus contiguus* Aoki, 1969

*L.* *flammeus* Aoki, 1969

*L.* *kilchini* Choi, 1985

*L.* *orthogonios* Aoki, 1959

*L.* sp.

Family Charassobatidae Grandjean, 1958

*Charassobates* sp.

Family Carabodidae Koch, 1837 검둥이응애과

*Carabodes peniculatus* Aoki, 1970

*C.* *transversarius* Choi et Aoki, 1986

*C.* sp.

Family Tectocepheidae Grandjean, 1953

사각머리응애과

*Tectocepheus cuspidentatus* Knülle, 1954

*T.* *velatus* (Michael, 1880)

*T.* *titanius* Okubo, 1982

Family Otocepheidae Balogh, 1961

오징어응애과

*Dolicheremaeus elongatus* Aoki, 1967

*D.* *baloghi* Aoki 1967

*Fissicepheus haradai* Choi, 1986

*F.* *mitis* Aoki, 1970

*Megalotocepheus japonicus* Aoki 1965

*Trichotocepheus erabuensis* Aoki, 1965

Family Oppiidae Grandjean, 1951 좁쌀응애과

*Arcoppia vipera* (Aoki, 1959)

*Brachioppiella ctenifera barbata* Choi, 1986

*B.* *cf. sheshanensis* Wen et al. 1984

*Machuella ventrisetosa* Hammer, 1961

*Multioppia gapsaensis* Choi, 1986

*M.* *gracilis* Hammer, 1972

*Oppia minutissima* Sellnick, 1950

*O. neerlandica* (Oudemans, 1900)  
*O.* sp.  
*O.* sp.1  
*O.* sp.3  
*O.* sp.6  
*Oppiella nova* (Oudemans, 1902)  
*Quadroppia quadricarinata* (Michael, 1885)  
*Ramusella (Ramusella) sengbuschi* Hammer, 1968

Family Suctobelbidae Grandjean, 1954  
 유리창응애과

*Flagrosuctobelba natinata* (Aoki, 1961)  
*Suctobelbella frondosa* Aoki et Hukuyama, 1976  
*S.* *ongisensillata* Fujita et Fujikawa, 1987  
*S.* *yezoensis* Fujikawa et Fujita, 1987  
*S.* sp.  
*S.* sp.1  
*Suctobelbila tuberculata* Aoki, 1970

Family Haplozetidae Grandjean, 1936  
 소매응애과

*Rostrozetes pulcherrimus* Berlese, 1960

Family Oripodidae Jacot, 1925 뚜껑응애과  
*Incabates aokii* Choi, 1985  
*Oripoda pinicola* Aoki et Ohkubo, 1974

Family Parakalummidae Grandjean, 1963  
 주머니나비응애과

*Neoribates* sp.  
*Protokalumna parvisetigerum*, Aoki 1965

Family Scheloribatidae Grandjean, 1933  
 판날개응애과  
*Schelorbates latipes* (Koch, 1884)  
*S.* *rigidisetosus* Willmann, 1851

Family Protoribatidae Balogh et Balogh, 1984  
 긴소매응애과  
*Protoribates* sp.

Family Xylobatidae Balogh et Balogh, 1984  
 도포소매응애과  
*Xylobates* sp.  
*Perxylobates coreanus* Choi, 1986

Family Chamobatidae Grandjean, 1954  
*Chamobates* sp.

Family Ceratozetidae Jacot, 1925 잔날개응애과  
*Ceratozetes* spp.  
*Boreozetes donghaksensis* Choi, 1986  
*Diapterobates songliensis* CHOI, 1986  
*D.* sp.

Family Mycobatidae Grandjean, 1953  
 사다리응애과  
*Punctoribates punctum* (Koch, 1839)

Family Phenopelopidae Ewing, 1917 엽마응애과  
*Euphlops acromios* (Hermann, 1804)

Family Oribatellidae Jacot, 1925 판지개응애과  
*Oribatella meridionalis* Berlese, 1908

Family Galumnidae Jacot, 1925 나비응애과  
*Galumna chujoi* Aoki, 1966  
*G.* *longiporosa* Fujikawa, 1972  
*G.* sp.

*Trichogalumna lineata* Okubo, 1964I  
*Pergalumna intermedia* Aoki, 1963  
*P.* *magnipora* Aoki, 1961  
*P.* sp.

## 적 요

광릉 지역에서 수행된 토양서식성 날개응애류 생물상 조사 결과, 침엽수림지역(45임반)에서는 42과 76속 101종이 조사되었으며, 활엽수림지역(44임반)에서는 40과 69속 108종이 조사되었다.

검색어 : 날개응애, 침엽수림지역, 활엽수림지역, 광릉

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