BRACONIDAE (HYMENOPTERA) FROM KOREA XXII. SUBFAMILY ALYSIINAE*

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Fivehundred seventeen Alysiinae braconid specimens taken in Korea served for the present elaboration, the material represents 39 Alysiini and 64 Dacnusini species, i.e. a total of 103 species. From among them eight species are new to science: (Alysiini:) *Adelphenaldis correcta* sp. n., *Apronopa levis* sp. n., *Synaldis venustula* sp. n., *Aspilota turgida* sp. n. and (Dacnusini:) *Antrusa bispinula* sp. n., *Antrusa dilatata* sp. n., *Dacnusa luctuosa* sp. n., *Dacnusa reno* sp. n. The new species are described and related to their nearest allies. A redescription of *Epimicta longicaudalis* TOBIAS is presented. The majority of the known species is new to the fauna of Korea. The locality data of the known species are completed, where necessary, with faunistic and distributional contributions. With 121 original figures.

Key words: Korea, braconids, list of localities, faunistic data, new species with nearest allies.

INTRODUCTION

The present elaboration of the Korean braconid wasps Alysiinae is based on a total of 517 specimens, the Alysiini comprises 320 and the Dacnusini comprises 197 specimens. Regarding the species numbers these figures are as follows: Alysiini is represented by 39 and Dacnusini by 64 species, i.e. a total of 103 Alysiinae species. From among the 39 alysiine species four and from among the 64 dacnusine species also four are new to science. They are as follows: (Alysiini:) Adelphenaldis correcta sp. n., Apronopa levis sp. n., Synaldis venustula sp. n., Aspilota turgida sp. n. and (Dacnusini:) Antrusa bispinula sp. n., Antrusa dilatata sp. n., Dacnusa luctuosa sp. n., Dacnusa reno sp. n. The majority of the known species is new to the fauna of Korea. The alysiine (Alysiini and Dacnusini) species were identified mainly by using TOBIAS's (1986: 100–231), BELOKOBYLSKIJ's (1998: 163–298) and TOBIAS's (1998: 299–411) books.

The braconid wasps from North Korea (or Democratic People's Republic of Korea) were collected by the staff-members of the Hungarian Natural History Museum, Budapest, during their collecting trips in the years 1970–1992 – those from South Korea (or Republic of Korea) mostly by D.-S. KU and some by J.-Y. CHOI in the years 1987–1997. Further details concerning Hungarian naturalists, collectings etc. are presented in my previous paper (PAPP 1990*a*). The majority of the braco-

* Zoological Collectings by the Hungarian Natural History Museum in Korea, No. 142.

nids is deposited in the Hungarian Natural History Museum, Budapest and a portion is housed in Dr. D.-S. Ku's Collection (Sancheong, South Korea) – both materials served for the present account.

In the chapter "Faunistic list" the localities are given in an abbreviated form, i.e. with the locality numbers presented in the original itinerary of the collecting trips. In the previous eight papers of my series (PAPP 1989, 1990*a*, *b*, 1992, 1994, 1996, 2001, 2003) on the braconids of Korea I have published a long list of the locality numbers completed with the detailed collecting sites, collecting time and with the short characterization of the vegetation of the collecting sites as well as with the collecting device, etc. Below those four locality numbers with detailed data are listed which were not included in my previous papers mentioned.

- No. 52. Prov. Kanwon, Kum-gang san (or Diamond Mts), environs of Hotel Go-song; 29 V 1970.
 Netting on marginal vegetation of brook.
- No. 344. Tesson, water basin, about 35 km SW from Pyongyan, 4 VII 1977. Netting in the grass vegetation of the water side.
- No. 369. Mt. Pektu, environs of Explosion Lake, 18 VII 1977. Netting in grass vegetation, about 2000–2500 m above sea level.
- No. 920. Pyongyang City, Mt. Ryongak, 17 V 1985. Warm sunny forenoon. Sweeping the road-side vegetation including scrub-wood and the foliage of trees (mostly *Quercus dentata* and an *Ulmus* sp.).

The South Korean localities by D.-S. KU are numbered separately, subsequently the numbers (KU 1, KU 2...) and their inhered locality names etc. are listed:

- Ku 1. Cheju, Seogwipo Pomok, Is. Sup, 30 VII 1993.
- Ku 2. Chonnam, Yochon Nammyon, Yondo, 21VII 1993.
- Ku 3. Chonnam, Yochon Nammyon, Andori, 4 VIII 1993.
- Ku 4. Chonnam, Yochon Nammyon, Uhak Kukudo, 4 VIII 1993.
- Ku 5. Chungbuk, Checheon, Pengyang Pakdalje, 23 V 1993.
- Ku 6. Chungbuk, Chungju Sanrim, Hyangsan, 23 V 1993.
- Ku 7. Chungbuk, Chungju Sanchok, Yongdong, 23 V 1993.
- KU 8. Chungbuk, Koesan Chongchong, Sagimak, 23 V 1993.
- Ku 9. Chungbuk, Okchon Iwon Iwon, 22 V 1993.
- Ku 10. Chungnam, Kumsan Chubu, Kaedoksa, 22 V 1993.
- Ku 11. Chungnam, Mt. Kyeryong, 9 VII 1987.
- Ku 12. Chungnam, Yesan Sudoksa, 11 VIII 1991.
- KU 13. Chungnam, GyeongNam, Chinju City, Chojeon-dong, taken at night with lamp, 1–2 VII 1993, 21–22 VII 1993 23–24 VIII 1993, 17–18 VII 1995, 16–17 IX 1993.
- Ku 14. GyeongNam, Goseong, Gun Samsan-myeon, Byeon-gsan-ri, Taken with UV lamp, 19–20 VIII 1993.
- KU 15. Jeonnam Kwangyang, Okryong Dongbok, Mt. Paikun, taken with UV lamp, 14 V 1994.
- Ku 16. Kangwon, Chunchon Shinbuk, Chochon 5-ri, 25 V 1993.
- Ku 17. Kangwon, Chunchon Shinbuk, Soyangdaem, 25 V 1993.

- Ku 18. Kangwon, Inje Inje Hakang, 27 V 1993.
- Ku 19. Kangwon, Kosong Hyunnae, Machajinri Tongilljeonmangdae, 25 V 1993.
- Ku 20. Kangwon, Kosong Hyunnae, Paebong, 26 V 1993.
- Ku 21. Kangwon, Kosong Kansong, 25 V 1993.
- Ku 22. Kangwon, Kosong Kansong, Kongbongsa, 26 V 1993.
- Ku 23. Kangwon, Pyongchang, Mt. Odae, 27 V 1993 leg. J.-Y. CHOI, 10 IX 1997 leg. D.-S. Ku.
- Ku 24. Kangwon, Mt. Solak, V 1993, V 1997.
- Ku 25. Kangwon, Mt. Solak Paekdansa, 25 V 1993.
- Ku 26. Kangwon, Mt. Tabaek Sangjangdong, 13 V 1991, 28 V 1993.
- Ku 27. Kangwon, Tonghae Pukpyong, 28 V 1993.
- Ku 28. Kyongbuk, Andong, Bukhoo, Jangki, 9 V 1997.
- Ku 29. Kyongbuk, Kyongsan, Univ. Yongnam, 4 V 1988, 30 V 1989.
- Ku 30. Kyongbuk, Ponghwa Myongho, Kokye, 28 V 1993.
- KU 31. Kyongbuk, Ponghwa Myongho, Kwanchang, 28 V 1993.
- KU 32. Kyongbuk, Ponghwa Pobjon Oji Norujae, 28 V 1993.
- Ku 33. Kyongbuk, Ponghwa Sokpo Sokpo, 28 V 1993.
- Ku 34. Kyongbuk, Sangju, Mt. Cheonghwa, 29 VIII 1997.
- Ku 35. Kyongbuk, Uiseong, Danmil Nakjeong, 14 VIII 1994, leg. J.-Y. CHOI.
- Ku 36. Kyongbuk, Yeongju, Pungki Heebangsa, Sobaek, 9 V 1997.
- Ku 37. Kyongbuk, Yongchon Hwabuk, Nokwijae, 29 V 1993.
- Ku 38. Kyongbuk, Yongchon Pond Osu, 29 V 1993.
- Ku 39. Kyonggi, Hwasong Pibong, 1 VI 1994.
- Ku 40. Kyonggi, Suwon, 15 VI 1994.
- KU 41. Kyonggi, Suwon, Mt. Yogi, 29 IV 1994, 11 V 1994, 11–19 V 1994 taken with Malaise trap, 11 V–13 VII 1994 Malaise trap, 29 VI 1994, 18 VI–20 VII 1994 Malaise trap, 29 VI–6 VII 1994 Malaise trap, VI–VII 1994 Malaise trap, 6–13 VII 1994 Malaise trap, 13–20 VII 19994 Malaise trap.
- Ku 42. Kyonggi, Yanggu Duta, 30 V 1992.
- Ku 43. Kyongnam, Chinju, Chojeon-dong, taken with UV-lamp pm 11–12h, 7–8 VI 1995, 9–10
 VI 1995, 18–19 VI 1995, 20–21 VI 1995, 20 VII 1995, 31 VII–1 VIII 1995.
- Ku 44. Kyongnam, Chinju Kajwa, 16–23 VI 1993, 25 X 1993, 3 XI 1993.
- Ku 45. Kyongnam, Chinju-shi Kajwadong, 15 V 1993, 18 V 1993, 14 V-30 VIII 1993 Malaise trap, 9 VI 1993,ss 16-23 VI 1993 Malaise trap, 14 VII 1993, 25 VII 1993, 22 VIII 1993, 22-30 VIII 1993 Malaise trap, 30 VIII 1993, 21 IX 1993.

The following abbreviations are applied in the chapters "Faunistic list" and "Descriptions of the new species" (VAN ACHTERBERG 1993):

Eyes – OOL = ocellar-ocular line (or shortest distance between hind ocellus and compound eye). POL = postocellar line (or shortest distance between hind two ocelli).

Fore wing -m-cu = transverse medio-cubital or recurrent vein; r = transverse radial vein; CU1a-b = first (a) and second (b) apical sections of subdiscoidal vein; I-RI = first section of metacarpal vein; 2-SR = first transverse cubital vein; 3-SR second section of radial vein; 3-CUI = basal section of subdiscoidal vein; SRI = third section of radial vein.

Hind wing -cu-a = nervellus; M+Cu = first section of mediella vein; I-M = second section of mediella vein.

FAUNISTIC LIST

Tribe Alysiini

Subsequently the Alysiini species are ranged into ten genera with an indication of the species (and specimen) numbers: *Adelphenaldis* 1 (6), *Alloea* 1 (2), *Aphaereta* 7 (55), *Apronopa* 1 (1), *Asobara* 4 (58), *Aspilota* 1 (1), *Idiasta* 4 (27), *Orthostigma* 10 (97), *Synaldis* 8 (68), *Tanycarpa* 2 (5) and *Trachyusa* 1 (1); a total of 39 species (320 specimens). The species are enumerated in alphabetical order of their generic and species names. Locality data are given for every species, faunistic etc. notes are added where necessary.

 $Adelphenaldis\ correcta$ sp. n.: for the description see the chapter "Description of the new species".

Apronopa levis sp. n.: for the description see the chapter "Description of the new species".

Alloea kostroma BELOKOBYLSKIJ, 1998 – 1 $\ \$ + 1 $\ \ \$: KU 22. 3 $\ \ \$: KU 23. – Described on the basis of several female and male specimens from Asiatic Russia (Primorski Krai, Sakhalin, Kuril Islands). New to the fauna of Korea.

Aphaereta alkonost Belokobylskij, 1998 – 1 $\,$ No. 376. – Described from the Maritime Territory (Spassk) of Asiatic Russia (Belokobylskij 1998: 274) on the basis of two female specimens. New to the fauna of Korea. – The single Korean female deviates in five features from the description: (1) antenna with 22 antennomeres (26–27); (2) ovipositor sheath one-fifth as long as fore wing; (3) medio-longitudinal sulcus ending at declivous part of mesoscutum; (4) head and mesosoma black, first tergite rusty, metasoma brownish black, legs yellow; (5) body 2 mm long.

Aphaereta brevis Tobias, 1962 – 1 \circlearrowleft : Ku 9. 2 \hookrightarrow : Ku 13. 1 \circlearrowleft : Ku 30. 1 \circlearrowleft : Ku 41. 2 \hookrightarrow : Ku 45. – Sporadic in the Palaearctic Region, a rare species. First reported from Korea by me (PAPP 1994: 136). – Variable features: (1) antenna with 19–20 antennomeres (19: 3 \hookrightarrow , 20: 4 \hookrightarrow); (2) colour of body brown to light brown, mesosoma nearly entirely and tergites 1–2(–3) yellow.

Aphaereta difficilis NIXON, 1939 - 1 \updownarrow : KU 29, 30 V 1989, leg. J.-Y. CHA. – Distributed in the Palaearctic Region. First reported from Korea by PAPP (1994: 136).

Aphaereta minuta (NEES, 1812) – 1 \circlearrowleft : No. 182. 1 \circlearrowleft : North Korea, North Hwange, prov. Sarivon, 28 IX 1994, leg. F. MÉSZÁROS et L. ZOMBORI. 3 \circlearrowleft : Ku 9. 2 \circlearrowleft : Ku 13. 1 \circlearrowleft : Ku 24. 2 \circlearrowleft : Ku 31. 7 \circlearrowleft + 2 \circlearrowleft : Ku 35.8 \hookrightarrow : Ku 41: 6–20 VII 1994 taken with Malaise trap. – Widely distributed and frequent to common in the Palaearctic Region. Reported from Korea by PAPP (1994: 136). – Variable features: (1) antenna with (19-)20–24(–25) antennomeres; (2) first tergite 1.2 times longer than to as long as broad behind; (3) prosternum + anterior half of pronotum and first tergite testaceous, legs yellow, coxae whitish.

Aphaereta stigmaticalis THOMSON, $1895 - 1 + 4 \stackrel{?}{\circlearrowleft}$: KU 29, 29 IV 1988 leg. J.-Y. CHA. – Described from Sweden, reported from England, Poland and Hungary. New to the fauna of Korea.

Aphaereta tricolor PAPP, 1994 – 1 ♀: Ku 17. 1 ♀: Ku 21. 1 ♀: Ku 45, 9 VI 1993. – Described from Korea (PAPP 1994: 138), reported from the Primorski Krai of Asiatic Russia. – Additional fea-

tures: (1) antenna with 20 antennomeres; (2) ground colour of body brown without blackish (head) and rusty brown (meso- and metasoma) pattern.

Asobara orientalis VIERECK, 1913 – 1 ♀: Ku 43. 1 ♀: Ku 45, 25 VII 1993. – Known in India and Philippines (PAPP 1967: 148). New to the fauna of Korea.

Asobara rufescens FOERSTER, 1862 - 1 \circlearrowleft : No. 144.2 \circlearrowleft : Ku 9.1 \circlearrowleft : Ku 13.1 \circlearrowleft + 1 \circlearrowleft : Ku 43 (1 \circlearrowleft : 20 VII 1995 and 1 \circlearrowleft : 31 VII–1 VIII 1995 taken with UV lamp). 1 \circlearrowleft : Ku 44 (16–23 VI 1993). 2 \circlearrowleft : Ku 45 (1 \circlearrowleft : 25 VII 1993, 1 \circlearrowleft : 22 VIII 1993). – Reported from Korea (PAPP 1994: 136); BELOKOBYLSKIJ (1998: 268) did not report it from Asiatic Russia and, furthermore, he remarked that the difference between *A. rufescens* and *A. tabida* is very small. – The two species in question taken in Korea, indeed, are very similar to each other and are separated as follows: (1) first tergite as long as broad behind (*rufescens*) / slightly longer than broad behind (*tabida*); (2) meso- and metasoma almost entirely yellow to testaceous (*rufescens*) / brown to dark brown, first tergite reddish (*tabida*).

Asobara tabida (NEES, 1834) − 1 \diamondsuit : No. 218. 1 \diamondsuit : No. 225. 1 \diamondsuit : No. 961. 1 \diamondsuit : No. 963. 1 \diamondsuit + 2 \diamondsuit : Ku 5. 1 \diamondsuit + 2 \diamondsuit : Ku 9. 1 \diamondsuit : Ku 12. 3 \diamondsuit : Ku 13. 4 \diamondsuit + 4 \diamondsuit : Ku 22. 2 \diamondsuit : Ku 25. 1 \diamondsuit : Ku 26. 2 \diamondsuit + 6 \diamondsuit : Ku 30. 2 \diamondsuit : Ku 31. 1 \diamondsuit : Ku 40. 1 \diamondsuit + 1 \diamondsuit : Ku 45. 1 \diamondsuit : Ku 47. − Most frequent *Asobara* species in the Palaearctic Region.

Aspilota turgida sp. n.: for the description see the chapter "Description of the New Species".

Idiasta buriat BELOKOBYLSKIJ, 1998 – 2 \circlearrowleft : KU 7. – Described from Buryatiya of Asiatic Russia on the basis of two male specimens (female unknown) (BELOKOBYLSKIJ 1998: 279). New to the fauna of Korea. – The two Korean males match the description; deviating features: (1) antenna with 31 (1 \circlearrowleft) and 32 (1 \circlearrowleft) antennomeres; (2) fore wing: r very short, one-fifth as long as 3–SR; (3) hind femur 6.6–6.8 times as long as broad distally; (4) tegula yellow, tergites 2–3 reddish to rusty.

Idiasta dichrocera Königsmann, 1960 – 1 \circlearrowleft : Ku 17. 1 \circlearrowleft : Ku 22. 2 \circlearrowleft : Ku 30. 2 \hookrightarrow : Ku 40. 1 \circlearrowleft : Ku 41 (29 IV 1994). 1 \hookrightarrow : Ku 43. – Widely distributed in the Palaearctic Region. First reported from Korea by Papp (1994: 137).

Idiasta pallida PAPP 1994, male new. -2 ♀: Ku 41 (VI–VII 1994 taken with Malaise trap). 7 ♀ + 6 𝔻: Ku 45. 1 ♀: Ku 47. - Described from Korea on the basis of three female specimens (PAPP 1994: 142), reported from the Primorski Krai of Asiatic Russia (Belokobylskii 1998: 280). - Deviating features of the females: (1) antenna with 31–33 antennomeres (31: 2 ♀, 32: 3 ♀, 33: 3 ♀); (2) first tergite 1.5–1.6 times as long as broad behind; (3) hind femur 5.2–5.5 times as long as broad distally. The male is similar to the female: (1) antenna with 37–40 antennomeres (37: 3 ∂, 40: 1 ∂); (2) first tergite (1.5–)1.6–1.7 times as long as broad behind.

Idiasta picticornis (RUTHE, 1854) – 1 \circlearrowleft : Ku 22. – Known in Germany, Hungary, Slovakia and China (several provinces). New to the fauna of Korea.

Orthostigma bicolor BELOKOBYLSKIJ, 1998 – 1 \circlearrowleft : No. 140. 1 \circlearrowleft : No. 144. 2 \circlearrowleft : No. 273. 1 \circlearrowleft : KU 26 (28 V 1993). 5 \hookrightarrow : KU 45 (22–30 VIII 1993). – Described from the Primorski Krai of Asiatic Russia

by $10 \ + 2 \ \$ type specimens. New to the fauna of Korea. – My specimens $(7 \ + 3 \ \)$ match the original description (BELOKOBYLSKIJ 1998: 212), but deviating as follows: (1) antenna with 17–21 (females, 17: 1 $\ \$, 19: $2 \ \$, 20: $2 \ \$, 21: $1 \ \$) and 21–24 (males, 21: $1 \ \$) 22: $1 \ \$, 24: $1 \ \$); (2) first tergite 1.7–1.8(–2) times as long as broad behind; (3) pronotum and mesoscutum as well as metasoma beyond first tergite with variable darkening colour.

Orthostigma cratospilum THOMSON, 1895 (= Aspilota sibirica TELENGA, 1935) -1 \circlearrowleft : No. 273. 1 \circlearrowleft : No. 251. 1 \circlearrowleft : No. 917. 1 \circlearrowleft : No. 1331. 1 \circlearrowleft : Ku 7. 1 \circlearrowleft : Ku 18. 1 \hookrightarrow : Ku 22. – Frequent to common in the Palaearctic Region. BELOKOBYLSKIJ (1998: 214) was the first who reported it from Korea.

Orthostigma dentatum Belokobylskii, 1998 – 1 ♀: No. 282. – Described from several regions of Asiatic Russia (Khabarovski Krai, Primorski Krai, Buryatiya, Tuva) (Belokobylskii 1998: 214). New to the fauna of Korea.

Orthostigma laticeps (THOMSON, 1895) – $1 \circlearrowleft$: No. 376. $1 \hookrightarrow$: Ku 7. $1 \circlearrowleft$: Ku 10. $1 \circlearrowleft$: Ku 25. $1 \hookrightarrow$: Ku 46. – In eastern Palaearctic Region widely distributed (BELOKOBYLSKIJ 1998: 214). New to the fauna of Korea.

Orthostigma longicubitale KÖNIGSNANN, 1969 – 1 \cite{G} : KU 19. 1 \cite{G} : KU 22. 2 \cite{G} : KU 27. 1 \cite{G} : KU 38. 7 \cite{G} + 1 \cite{G} : KU 41 (18 VI–20 VII 1994 taken with Malaise trap). 4 \cite{G} + 4 \cite{G} : KU 45 (4 \cite{G} + 1 \cite{G} : 14 VII 1993, 2 \cite{G} : 22 VIII 1993, 1 \cite{G} : 21 IX 1993). – Since its description known in seven countries of Europe. New to the fauna of Korea.

Orthostigma lucidum Königsmann, 1969 – 1 \diamondsuit : No. 19. 1 \diamondsuit : No. 139. 5 \diamondsuit + 1 \circlearrowleft : No. 144. 2 \diamondsuit : No. 145. 1 \circlearrowleft : No. 206. 1 \diamondsuit : No. 225. 1 \circlearrowleft : No. 251. 1 \diamondsuit + 1 \circlearrowleft : No. 267. 1 \circlearrowleft : No. 273. 2 \diamondsuit + 1 \circlearrowleft : No. 282. 1 \circlearrowleft : No. 332. 1 \circlearrowleft : No. 374. 1 \diamondsuit + 2 \circlearrowleft : No. 376. 1 \diamondsuit : No. 617. 1 \diamondsuit : No. 729. 1 \diamondsuit : Ku 1.1 \diamondsuit : Ku 45 (22 VIII 1993). – Widely distributed in the eastern Palaearctic Region. New to the fauna of Korea. – Deviating features: (1) antenna with (18–)20–22(–24) antennomeres; (2) first tergite 1.3–1.5 times length of hind width; (3) body dark coloured with first tergite reddish yellow, meso- and metasoma variably reddish yellow to testaceous, head and mesoscutum usually dark coloured.

Orthostigma mandibulare (Tobias, 1962) – 1 \circlearrowleft : No. 273. 1 \circlearrowleft : No. 332. 1 \circlearrowleft : No. 952. 1 \hookrightarrow : No. 956. 1 \hookrightarrow : No. 963. 1 \circlearrowleft : Kangwon, Mt. Kumgang, 25 IX 1994, leg. F. Mészáros et L. Zombori. 1 \circlearrowleft : Ku 7. 2 \hookrightarrow + 6 \circlearrowleft : Ku 22. 1 \hookrightarrow : Ku 23 (27 V 1993). – Widely distributed in the Palaearctic Region. New to the fauna of Korea.

Orthostigma maska Belokobylskii, 1998-1 \subsetneq : Ku 20.- Described from Maritime Territory and from Kuril Islands of Asiatic Russia. New to the fauna of Korea.

Synaldis concolor (NEES, 1812) – 1 ♀: Ku 24 (V 1997).

Synaldis distenta PAPP, 1994 (Figs 1–4) – 1 \circlearrowleft : No. 182. – Described from Korea (PAPP 1994: 144) on the basis of the female holotype specimen; BELOKOBYLSKII (2004a: 219) reported further three females from the Primorski Krai of Asiatic Russia. – My female is identical with the holotype except the following features: (1) first flagellomere somewhat longer than second flagellomere (Fig. 1) (holotype: 1.4 times as in Fig. 2), antenna with 15 antennomeres; (2) pair of spiracles of propodeum large (Fig. 3) (holotype: less large as in Fig. 15 in PAPP 1994: 144); (3) hind femur a bit thicker, 2.8 times as long as broad medially (Fig. 4) (holotype: three times longer, as in Fig. 16 l.c.); (4) paraclypeal (or tentorial) pit short, half as long as its distance from compound eye.

Synaldis distracta (NEES, 1834) – 4 ♂: Ku 7. 1 ♂: Ku 29 (4 V 1988).

Synaldis hirsuta Papp, 1994 – 1 \circlearrowleft : Ku 37. 1 \circlearrowleft : Ku 41 (11 V 1994). – Described from Korea (Papp 1994: 147), reported from Asiatic Russia (Primorski Krai, Sakhalin) and Japan: Hokkaido (Belokobylskij 2002: 885). – The single female from Korea deviates from the female holotype in three features: (1) mandible less broadening distally, 1.6 (and not 1.75) times as broad as long; (2) antenna with 19 antennomeres (the females from Russia with 18–21(–23) antennomeres); (3) ground colour of body rusty brown. The single male matches the original description, body 1.5 mm long.

Synaldis extremiorientalis Belokobylskii, 2002 - 1 \bigcirc : Ku 45 (30 VIII 1993). – Described recently (Belokobylskii 2002: 400) from Asiatic Russia (Far East) and Japan. New to the fauna of Korea. – My single female deviates from the description in the following features: (1) antenna with 22 antennomeres (description: 17–21); (2) eye in dorsal view 1.8 times as long as temple (description: 1.2–1.4 times); (3) body reddish yellow with brownish pattern, head blackish brown.

Synaldis mandibulata FISCHER, 1970 – 1 \circlearrowleft : KU 25. 1 \circlearrowleft : KU 37. – Hitherto known in Finland, Estonia, Poland, Austria and Hungary. New to the fauna of Korea.

Synaldis venustula sp. n.: for the description see the chapter "Description of the new species".

Tanycarpa chors Belokobylskii, 1998 – 4 ♂: Ku 22. – Described from Asiatic Russia (Jewish Autonomous District, Primorski Krai, Sakhalin, Kuril Islands) (Belokobylskii 1998: 201). New to the fauna of Korea.

Trachyusa aurora (HALIDAY, 1838) – 1 ♀: KU 31. – In the western Palaearctics widely distributed albeit its occurrence is sporadic (TOBIAS 1986: 157). New to the fauna of Korea.

Tribe Dacnusini

Subsequently the Dacnusini species are ranged into thirteen genera with an indication of the species (and specimen) numbers: *Agonia* 1 (3), *Antrusa* 6: two new species (12), *Chorebus* 27 (73), *Coelinidea* 4 (20), *Dacnusa* 12: two new species (35), *Epimicta* 1 (4), *Exotela* 4 (15), *Parasymphya* 1 (2), *Polemochartus* 1 (4), *Protodacnusa* 2 (3), *Sarops* 1 (17), *Synelix* 1 (2) and *Trachionus* 2 (7). Locality data are given for every species, faunistic etc. notes are added where necessary.

Agonia adducta (HALIDAY, 1839) – 1 \circlearrowleft : No. 273. 1 \circlearrowleft : No. 281. 1 \circlearrowleft : KU 16. – First reported from Korea recently (PAPP 2003: 127).

Antrusa bispinula sp. n.: for the description see the chapter "Description of the new species".

Antrusa chrysotegula Tobias, $1986 - 5 \subsetneq$: Ku 22. – Described on the basis of a single male specimen from European Russia (Yaroslavskaya district). New to the fauna of Korea. – My five Korean females match the short description of the male (Tobias 1986: 212), additional features are as follows: (1) antenna somewhat longer than body and with 33–35 antennomeres, distal flagellomeres 1.4 times as long as broad; (2) m–cu more or less antefurcal; (3) first tergite evenly broadening posteriorly, somewhat longer than broad behind, longitudinally rugose; (4) hypygium pointed, ovipositor

sheath as long as hind tarsomeres 1–4 combined; (5) tegula yellow, parategula vivid yellow; (6) metasoma brown, first tergite black.

Antrusa dilata sp. n.: for the description see the chapter "Description of the new species". Antrusa flavicoxa (Thomson, 1895) – 1 \updownarrow : No. 992. – First reported from Korea recently by PAPP (2003: 127).

Antrusa melanocera (THOMSON, 1895) – 1 \circlearrowleft : Ku 19. 1 \circlearrowleft : Ku 25. – Distributed in the Palaearctic Region, a sporadic to frequent species. New to the fauna of Korea.

Antrusa vaenia Nixon, 1954 – 1 \circlearrowleft : No. 374. 1 \circlearrowleft : No. 376. – Described from England and Germany, reported from Austria and European Russia. New to the fauna of Korea. – Additional features to the two Korean males: (1) antenna with 31–32 antennomeres; (2) head in dorsal view twice broader than long, temple beyond eye slightly swollen; (3) legs dark reddish yellow, coxae darkening. Turning up of the female sex the two males named *A. vaenia* may prove to represent a new species.

Chorebus (Phaenolexis) brevivalvis Tobias, 1998-1 \diamondsuit : Ku 22.2 \diamondsuit : Ku 27.- Described from Asiatic Russia (Primorski Krai, Sakhalin) on the basis of two females. New to the fauna of Korea. – Antenna with 32 antennomeres (1 \diamondsuit). First tergite three times as long as broad behind. Wings subfumous.

Chorebus (Stiphrocera) cubocephalus (Telenga, 1934) -1 \circlearrowleft : No. 150. 1 \circlearrowleft : No. 193. 1 \circlearrowleft : No. 237. 1 \circlearrowleft : No. 347. — In Asiatic Russia widely distributed (Tobias 1998: 359). New to the fauna of Korea.

Chorebus (Stiphrocera) cybelius TOBIAS, 1998 – 1 ♀: No. 970. – Described recently from Asiatic Russia: Primorski Krai. New to the fauna of Korea.

Chorebus (Stiphrocera) cylindratus TOBIAS, $1998-1\ \bigcirc$: No. $920.\ 1\ \bigcirc +1\ \bigcirc$: Ku $18.\ 1\ \bigcirc$: Ku $18.\ 1\ \bigcirc$: Ku 1993. — Described and hitherto known in Asiatic Russia: Primorski Krai. New to the fauna of Korea. — Antenna with 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930 (19930), 19930, 19931, 19

Chorebus (Stiphrocera) cylindricus (TELENGA, 1934) – 1 \updownarrow : No. 911. 1 \updownarrow + 1 \circlearrowleft : No. 920. 2 \updownarrow + 1 \circlearrowleft : No. 930. – Distributed in eastern Asiatic Russia (Primorski Krai, Khabarovski Territory), Japan. New to the fauna of Korea.

Chorebus (Stiphrocera) didas (NIXON, 1944) – 1 \circlearrowleft : No. 911. 1 \circlearrowleft : No. 917. 1 \circlearrowleft : No. 930. 1 \hookrightarrow : No. 970. – Widely distributed in the Palaearctic Region. New to the fauna of Korea.

Chorebus (Stiphrocera) diremtus (NEES, 1834) – 1 ♂: No. 274. 1 ♂: No. 961. – In Asiatic Russia known in Primorski Krai, Sakhalin (TOBIAS 1998: 358) and in Mongolia (PAPP 2005: 226). New to the fauna of Korea.

Chorebus (Paenolexis) elegans TOBIAS, 1998 – 1 ♂: No. 1345. – Described recently from the Primorski Krai of Asiatic Russia. New to the fauna of Korea.

Chorebus (Phaenolexis) fumipennis Tobias, 1998 – 1 \circlearrowleft : Ku 22. – Described recently from the Asiatic Russia (Primorski Krai). New to the fauna of Korea.

Chorebus (Phaenolexis) fuscipennis (NIXON, 1937) -1 \circlearrowleft : KU 4. 1 \circlearrowleft : KU 27. – In Europe fairly widely distributed, reported from Azerbaidjan and Asiatic Russia (Primorski Krai). New to the fauna of Korea. – Hind half of mesoscutum bare and polished, first tergite 2.8–3 times as long as broad behind.

Chorebus (Phaenolexis) iridis GRIFFITHS, 1968 – 1 ♀: Ku 6. 1 ♂: Ku 41 (11 V 1994). – Known from Italy, Serbia, Azerbaidjan and Asiatic Russia (Primorski Krai). New to the fauna of Korea.

Chorebus (Phaenolexis) karelicus TOBIAS, 1986 – 1 ♂: No. 332. – Known in Russia in two distant localities: Karelia and Asiatic Primorski Krai; reported from Mongolia (PAPP 2005: 226). New to the fauna of Korea.

Chorebus (Phaenolexis) leptogaster (HALIDAY, 1839) – 1 ♂: No. 369. – In Asiatic Russia reported from the Chukotka Autonomous Area, Primorski Krai and Sakhalin. New to the fauna of Korea.

Chorebus (Stiphrocera) lissopleuris TOBIAS, 1998 - 1 \diamondsuit : No. 139. 2 \diamondsuit : No. 182. 1 \diamondsuit : No. 237. 1 \diamondsuit : No. 320. – The species is known in the Primorski Krai of Asiatic Russia and Mongolia (PAPP 2005: 227). New to the fauna of Korea.

Chorebus (Chorebus) longicornis (NEES, 1811) (= Bassus affinis NEES, 1812) – 1 \circlearrowleft : No. 1000. – In Asiatic Russia reported from the Primorski Krai, Sakhalin and Kuril Islands (TOBIAS 1998: 410) as well as from Mongolia (PAPP 2005: 225). New to the fauna of Korea.

Chorebus (Phaenolexis) macrornatus TOBIAS, 1998 – 1 ♂: KU 3. 1 ♂: KU 41. – Described from the Asiatic Russia: Primorski Krai, Kuril Islands. New to the fauna of Korea.

Chorebus (Phaenolexis) nerissus (NIXON, 1937) – 1 ♀: No. 281. – Widely though sporadically distributed in the Palaearctic Region; in Europe known in England, Sweden, Germany, Austria, Hungary, Ukraine and European Russia; in Asiatic Russia: Primorski Krai. New to the fauna of Korea.

Chorebus (Phaenolexis) nigriridis TOBIAS, 1998 – 1 ♀: Ku 23 (27 V 1993). – Known in Asiatic Russia (Sakhalin) and Mongolia (PAPP 2005: 227). New to the fauna of Korea.

Chorebus (Phaenolexis) petiolatus (NEES, 1834) – 1 \circlearrowleft : Ku 9.1 \circlearrowleft : Ku 25. 1 \circlearrowleft : Ku 39. 1 \circlearrowleft : Ku 45 (15 V 1993). – In Europe fairly frequent, reported from the Primorski Krai of Asiatic Russia and China. New to the fauna of Korea.

Chorebus (Stiphrocera) resus (NIXON, 1937) – 1 \subsetneq : No. 961. – In Europe known from seven countries; in Asiatic Russia reported from the Primorski Krai and Sakhalin. New to the fauna of Korea.

Chorebus (Phaenolexis) sakhalinicus ToBIAS, 1998 – 1 \circlearrowleft : KU 22. – Described by 1 \circlearrowleft + 1 \circlearrowleft from Sakhalin. New to the fauna of Korea. – Antenna with 43 antennomeres, hind tibia and tarsus equal in length, first tergite 2.3 times length of hind breadth.

Chorebus (Phaenolexis) serus (Nixon, 1937) -1 \bigcirc : No. 52. 1 \bigcirc : No. 288. 1 \bigcirc : No.376. 1 \bigcirc : No. 1331. 1 \bigcirc : Ku 4. 1 \bigcirc : Ku 7. 1 \bigcirc : Ku 14. 1 \bigcirc : Ku 16. 1 \bigcirc : Ku 31. 1 \bigcirc : Ku 34. 2 \bigcirc : Ku 39. 2 \bigcirc : Ku 41. 2 \bigcirc : Ku 45. — Known in three countries of Europe, reported from the Primorski Krai of Asiatic Russia. New to the fauna of Korea. — Antenna with 31 (1 \bigcirc), 34 (1 \bigcirc), 35 ((1 \bigcirc + 1 \bigcirc), 36 (4 \bigcirc) and 38 (1 \bigcirc) antennomeres; first tergite 2–2.2 times length of hind breadth.

Chorebus (Phaenolexis) sulcimarginis Tobias, 1998 – 1 ♂: No. 917. – Described recently from the Primorski Krai of Asiatic Russia. New to the fauna of Korea.

Chorebus (Phaenolexis) tenuivalvis Tobias, 1998 – 1 \subsetneq : No. 384. – Described recently from the Primorski Krai of Asiatic Russia. New to the fauna of Korea.

Chorebus (Paenolexis) trjapitzini TOBIAS, 1986 - 1 \updownarrow : No. 381. - Described from Karelia in European Russia, the Korean locality is the second report of its distribution. New to the fauna of Korea.

Chorebus (Chorebus) uliginosus (Haliday, 1839) – 1 $\stackrel{\frown}{}$: Ku 43. – In Europe widely distributed (Shenefelt 1974: 1069), in Asiatic Russia discovered recently: Irkutsk, Primorski Krai, Sakhalin (Tobias 1998: 377), reported from Mongolia (Papp 2005: 228). New to the fauna of Korea.

Chorebus (Phaenolexis) xiphidius (GRIFFITHS, $1967 - 1 \ \supseteq$: No. 274. $1 \ \circlearrowleft$: No. 376. – After its description it has been known (GRIFFITHS 1967b: 678) for a long time only from Germany; reported recently from Hungary, Serbia, Ukraine and from the Asiatic Russia (Primorski Krai, Chita Region). New to the fauna of Korea.

Coelinidea elegans (Curtis, 1829) − 2 \diamondsuit : Ku 6. 2 \diamondsuit + 1 \diamondsuit : Ku 7. 1 \diamondsuit : Ku 8. 1 \diamondsuit : Ku 18. 1 \diamondsuit : Ku 21. 1 \diamondsuit + 3 \diamondsuit : Ku 29 (30 V 1989). 2 \diamondsuit : Ku 45 (1 \diamondsuit : 18 V 1993, 1 \diamondsuit : 22 VIII 1993). 1 \diamondsuit : Ku 48.

Coelinidea gracile (Curtis, 1829) – 1 ♂: Ku 29 (30 V 1989).

Coelinidea ruficollis (HERRICH-SCHAEFFER, 1838) – 1 $\stackrel{\frown}{\downarrow}$ + 2 $\stackrel{\frown}{\circlearrowleft}$: KU 31.

Coelinidea viduum (Curtis, 1829) − 1 ♂: Ku 45 (15 V 1993).

Dacnusa (Pachysema) aquilegiae MARSHALL, 1896 – 2 ♂: No. 282. – In Europe known in five countries: Great Britain, Sweden, Germany, Poland, Hungary, Serbia, Romania; in Asiatic Russia reported from Buryatiya and the Primorski Krai. New to the fauna of Korea.

Dacnusa (Rizarcha) areolaris (NEES, 1812) – 1 \circlearrowleft : No. 1353. – Widely distributed and frequent to common in the Palaearctic Region. New to the fauna of Korea.

Dacnusa (*Pachysema*) *arkadii* Tobias, 1997 – 1 \Diamond : Ku 16. 1 \Diamond : Ku 32. – Described on the basis of several female (39 \Diamond) and male (9 \Diamond) specimens from the Kuril Islands (BELOKOBYLSKIJ & TOBIAS 1997: 13). New to the fauna of Korea.

Dacnusa (Pachysema) basirufa Tobias, 1998 – 1 \circlearrowleft : No. 198. – Described recently from the Far East Primorski Krai of Asiatic Russia. New to the fauna of Korea. – Very near to *D. austriaca* (FISCHER), their distinctive charaters are as follows (in parentheses features of *D. austriaca*; cf. FISCHER 1961: 21): (1) marginal cell reaching tip of wing (ending before tip of wing), (2) propodeum nearly entirely smooth, latero-medially with very weak sculpture (propodeum laterally sculptured), (3) antenna of female with 21–22 antennomeres (23–24).

Dacnusa (Pachysema) luctuosa sp. n.: for the description see the chapter "Description of the new species".

Dacnusa (Dacnusa) maculipes THOMSON, 1895 – 1 \diamondsuit : Ku 15. 1 \diamondsuit : Ku 41. 1 \diamondsuit : Ku 43 (20–21 VI 1995). 1 ℬ: Ku 45 (15 V 1993). 2 ℬ: Ku 47. – Frequent to common in the Palaearctic Region.

Dacnusa (Pachysema) paucicula TOBIAS, 1998 (Figs 5–7) – 1 \diamondsuit : KU 11. 3 \diamondsuit : KU 27. – Described recently from the Primorski Krai of Asiatic Russia on the basis of the female sex (TOBIAS 1998: 330). New to the fauna of Korea. – Additional features of the four Korean females: (1) head in dorsal view less transverse, 1.7 times as broad as long (Fig. 5); (2) antenna with 19 (3 \diamondsuit) and 20 (1 \diamondsuit) antennmeres; (3) pterostigma 5–6 times as long as wide, *SR1* about half as long as pterostigma (Fig. 6, see arrows), *m*–*cu* somewhat antefurcal (1 \diamondsuit); (4) first tergite somewhat longer than broad behind, densely rugulose, second tergite basally finely striolate (Fig. 7).

Dacnusa (*Dacnusa*) pseudolugens Tobias, 1998, 3 new (Figs 8–11) − 1 3: No. 282. – Described from Far East of Asiatic Russia (Magadan Region, Yakutiya, Primorski Krai). New to the fauna of Korea. – The Korean male specimen deviates in a few features from the female: (1) head in dorsal view twice as broad as long, head between temples a bit broader than between eyes (Fig. 8); (2) penultimate flagellomere 1.6 times as long as broad; (3) hind femur 4.1 times as long as broad distally (Fig. 9); (4) pterostigma twice as long as I-RI (Fig. 10); (5) pair of keels of first tergite distinct (Fig. 11); (6) legs brown to dark brown.

Dacnusa (Dacnusa) reno sp. n.: for the description see the chapter "Description of the new species".

Dacnusa (Aphanta) sasakawai TAKADA, 1977 (= D. distracta Tobias, 1986) − 1 ♀: No. 344. 3 ♂: North Korea, Tapdong, Suwon GG, 20 X 2002, leg. CHANG YEOL YANG. − Described from Japan (TAKADA 1977: 2), known in Russia (Voronezh Province, Far East Primorski Krai), Italy, Bulgaria, Hungary, Germany. New to the fauna of Korea.

Dacnusa (Pachysema) sulcipleuris Tobias, 1998 – 1 ♀: Ku 44 (25 X 1993). – Described from the Far East Primorski Krai of Asiatic Russia (Partizansk). New to the fauna of Korea. – The female specimen from Korea matching the description (Tobias 1998: 349, 351–353) except one feature: precoxal suture missing (and not "weak, smooth").

Epimicta longicaudalis TOBIAS, 1998: for redescription see the chapter "Description of the new species".

Exotela cyclogaster FOERSTER, 1862 - 1 \circlearrowleft : No. 281. 1 \hookrightarrow : Ku 22. 1 \hookrightarrow : Ku 44 (3 XI 1993). Most frequent *Exotela* species of the Palaearctic Region. Nearest to Korea known in Far East of Asiatic Russia (TOBIAS 1998: 323). New to the fauna of Korea.

Exotela facialis Thomson, $1895 - 3 \subsetneq$: Ku 26 (28 V 1993). 1 \circlearrowleft : Ku 36. – Described from Sweden, reported recently from Far East of Asiatic Russia. New to the fauna of Korea.

Exotela obscura GRIFFITHS, 1967 – 1 ♀: KU 19. – A Palaearctic species, nearest to Korea known in the Primorski Krai and Baykal Area of Asiatic Russia. New to the fauna of Korea.

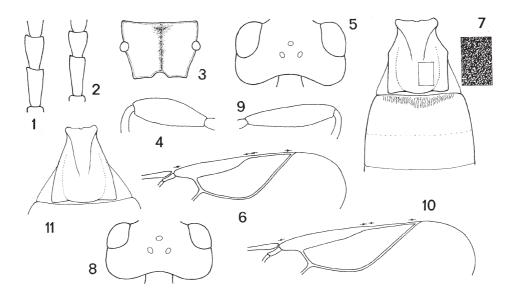
Exotela sonchina GRIFFITHS, 1967 - 1 \bigcirc : Ku 7.1 \bigcirc : Ku 40.5 \bigcirc : Ku 44 (1 \bigcirc : 25 X 1993, 4 \bigcirc : 3 XI 1993). – First reported from Korea recently by PAPP (2003: 127). Widely distributed in Far East of Asiatic Russia (TOBIAS 1998: 323).

Parasymphya dentata Tobias, 1998 – 1 \Diamond : Ku 5. 1 \Diamond : Ku 26 (13 V 1991). – Described and hitherto known in Far East of Asiatic Russia: Khabarovsk district, Primorski Krai. New to the fauna of Korea.

Polemochartus melas (GIRAUD, 1863) – 1 \bigcirc + 3 \circlearrowleft : KU 22. – A Palaeartic and fairly frequent species. New to the fauna of Korea.

Protodacnusa aridula (THOMSON, 1895) $-1 \ \bigcirc +1 \ \bigcirc$: No. 175. – Distributed sporadically in Europe, reported from Mongolia (PAPP 2005: 229). New to the fauna of Korea.

Protodacnusa littoralis Griffiths, 1964-1 \circlearrowleft : Ku 28. – Known sporadically in the western Palaearctic Region (Spain, Ireland, Denmark, European Russia, Azerbaidjan). New to the fauna of Korea.



Figs 1–11. 1–4. *Synaldis distenta* PAPP: 1–2 = flagellomeres 1–2 of the female (Fig. 1) and female holotype (Fig. 2) specimens, 3 = propodeum of the female, 4 = hind femur of the female. – 5–7. *Dacnusa paucicula* TOBIAS: 5 = head in dorsal view, 6 = distal part of right fore wing, 7 = tergites 1–3 with indication of the sculpture of the first tergite. – 8–11. *Dacnusa pseudolugens* TOBIAS: 8 = head in dorsal view, 9 = hind femur, 10 = distal part of right fore wing, 11 = first tergite

Sarops rea Nixon, 1942 - 1 \bigcirc : Ku 6.1 \bigcirc : Ku 18.3 \bigcirc + 6 \bigcirc : Ku 22.1 \bigcirc : Ku 26.1 \bigcirc : Ku 30.2 \bigcirc : Ku 31.2 \bigcirc : Ku 32. – Distributed in the Palaearctic Region; nearest to Korea reported from the Primorski Krai of Asiatic Russia. New to the fauna of Korea.

Synelix semirugosa (HALIDAY, 1839) – 1 ♂: No. 281. 1 ♂: No. 1000. – Widely distributed and fairly frequent in the Palaearctic Region. New to the fauna of Korea.

Trachionus mandibularis (NEES, 1814) – 1 \subsetneq + 3 \circlearrowleft : Ku 41 (29 IV 1994). – A Palaearctic and fairly frequent species; nearest to Korea reported from the Far East of Asiatic Russia (TOBIAS 1998: 311). New to the fauna of Korea.

Trachionus ringens (HALIDAY, 1839) – 1 \diamondsuit : KU 8. 2 \diamondsuit : KU 43 (18–19 VI 1995). – A Palaearctic and less frequent species. Nearest to Korea reported from the Far East of Asiatic Russia (TOBIAS 1998: 311).

DESCRIPTION OF THE NEW SPECIES

ALYSIINAE: ALYSIINI

Adelphenaldis correcta sp. n. ♀♂ (Figs 12–20)

Material examined (1 + 5) – Female holotype + three male paratypes: Korea, Prov. South Pyongan, Pyongyan, Hotel garden, taken with Malaise trap, 5–6 August 1971, leg. S. HORVATOVICH et J. Papp. – One male paratype: Korea, Prov. South Pyongan, De-sang san, 12 km NE fromPyongyan, 7 August 1971, leg. S. HORVATOVICH et J. Papp. – One male paratype (in Coll. Ku): Korea, Kangwon, Mt. Solak Paekdansa, 25 May 1993, leg. D.-S. Ku.

Female holotype and four male paratypes are deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. Nos 10965 (holotype) and 10966–10969 (paratypes). One male paratype in the Coll. D.-S. KU (Sancheong).

Holotype is in good condition: metasoma glued separately; paratypes are in fairly good condition, their antennae partly damaged, one paratype with somewhat creased wings, every specimen glued on a pointed card by mesosternum between coxae 1–2.

Etymology. – The species name "correcta" refers to the name correction: earlier I named this series as *Synaldis trematosa* FISCHER (PAPP 1994: 137); Dr. M. FISCHER was kind enough to call my attention that the series at hand represents a new species in the genus *Adelphenaldis* FISCHER, 2003.

Description of the female holotype. – Body 1.7 mm long. Antenna about as long as body and with 15 antennomeres. First flagellomere 2.7 times and second flagellomere 2.2 times as long as broad apically, flagellomeres 1 and 2 equal in length, further flagellomeres thickening, 1.8 times and penultimate flagellomere also 1.8 times as long as broad (Fig. 12). – Head in dorsal view (Fig. 13) transverse, 1.9 times as broad as long and 1.7 times as broad as mesosternum between tegulae, eye one-fourth longer than temple, temple rounded. Subclypeal (or tentorial) pit reaching compound eye. OOL almost three times as long as POL, ocelli small and elliptic. Eye in lateral view 1.5 times as high as wide, temple a bit less wide than eye. Mandible (Fig. 14) 2.1 times as long as broad between teeth 1 and 3, upper tooth small and rounded, middle tooth spiky, lower tooth as large as middle tooth and less spiky. Head polished.

Mesosoma in lateral view stout, a bit longer than high, polished. Pronope and mesoscutal dimple missing. Notaulix distinct though less deep, subcrenulate, restricted to declivous fore part of mesoscutum. Precoxal suture (or sternaulix) short, restricted to middle of mesopleuron, finely crenulate. Epicnemial suture finely crenulate. Propodeum areolated, transverse carina of areola basalis only medially pointed as in Fig. 15, pair of spiracles fairly large. – Hind femur 3.7 times as long as broad distally (Fig. 16). Hind tibia and tarsus equal in length. Hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing distinctly one-fourth longer than body. Pterostigma hardly broader than metacarpal vein. Veins r + 3SR relatively short, SR1 2.6 times as long as r + 3SR (Fig. 17); cu–a postfurcal, first subdiscal cell closed, CU1a issuing from upper point of 3–CU1 + CU1b combined (Fig. 18).

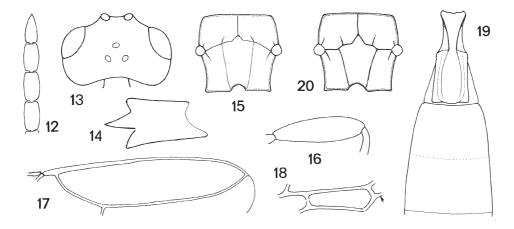
First tergite (Fig. 19) long, 2.3 times as long as broad, beyond pair of spiracles parallel-sided, spiracles just beyond middle of tergite, pair of converging keels distinct anteriorly, posteriorly faintly distinct. Tergites polished. Border between tergites 2–3 just distinct (Fig. 19). Third tergite a bit longer than second tergite. Ovipositor sheath in lateral view as long as hind basitarsus.

Body chestnut brown, first tergite brownish yellow, tergites 2–3 brown. Scape, pedicel and flagellomeres 1–2 yellow, flagellomere 3 darkening yellowish brownish, rest of flagellum brown. Palpi whitish, mandible yellow. Tegula yellow. Legs yellow. Wings hyaline, pterostigma and veins yellowish brownish.

Description of the five male paratypes. – Similar to the female holotype. Body 1.5–2.1 mm long $(1.5:1\cdots)$, $1.8:1\cdots$, $2:2\cdots$, $2.1:1\cdots$). Antenna with 17–19 antennomeres $(17:3\cdots)$, $18:1\cdots$, $19:1\cdots$), flagellum less thickening. Flagellomeres 1–2 equal in length, 3.2 times as long as broad apically, further flagellomeres 2.4 times and penultimate flagellomere 2.2 times as long as broad. Carinae of propodeum stronger than those of female (Fig. 20). First tergite 2.6 times as long as broad behind. Metasoma light brown to brown, posteriorly somewhat darkening.

Host unknown.

Distribution: Korea.



Figs 12–20. Adelphenaldis correcta sp. n.: 12 = ultimate four flagellokmeres, 13 = head in dorsal view, 14 = mandible, 15 = propodeum of female, 16 = hind femur, 17 = distal part of right fore wing, 18 = first subdiscal cell of fore wing, 19 = tergites 1–3, 20 = propodeum of male

The new species, *Adelphenaldis correcta*, is near to *A. trematosa* (FISCHER) considering their long paraclypeal pit (or tentorial pit, WHARTON 1985) reaching compound eye, the short and crenulated precoxal suture and the long first tergite; the two species are separated by the features keyed (male of *A. trematosa* unknown):

- 1 (2) Female: Distal flagellomeres at most hardly longer than broad (Fig. 98 in FISCHER 2003: 74). Areola basalis of propodeum somewhat wider and its upper transverse carina as in Fig. 104 (l. c.). First tergite twice as long as broad behind, posteriorly slightly broadening (Fig. 104 l. c.). Mesosoma in lateral view 1.5 times as long as high. SRI of fore wing twice as long as r + 3SR (Fig. 103 l. c.). Ovipositor sheath in lateral view just half as long as first tergite. \mathcal{P} : 1.8 mm. U.S.A. (Michigan) A. trematosa (FISCHER, 1967)

A. correcta sp. n.

Taxonomic remark. – The genus *Adelphenaldis* was described recently by FISCHER (2003: 41). Its generic difference from the genus *Synaldis* FOERSTER, 1862 is restricted to the length of the paraclypeal (or tentorial) pit and the mesoscutal dimple: (1) *Adelphenaldis*: pit large and reaching the compound eye, mesoscutal dimple either present or missing and (2) *Synaldis*: pit short and not reaching compound eye, mesoscutal dimple usually present. After FISCHER (1967 and 1. c.) and BELOKOBYLSKIJ (2002) the following species are assigned to the genus *Adelphenaldis*:

- A. acutidentata (FISCHER, 1970) Austria, China
- A. brunicorpus FISCHER, 2003 Republic of South Africa
- A. claricornis (FISCHER, 1993) Congo
- A. correcta sp. n. Korea
- A. crassimembris FISCHER, 2003 Republic of South Africa
- A. crassithorax FISCHER, 2003 Republic of South Africa
- A. cultrata (BELOKOBYLSKIJ, 2002) Asiatic Russia
- A. georgica (FISCHER, 1993) Georgia
- A. gigascapus (FISCHER, 1993) India

- A. knysnaana FISCHER, 2003 Republic of South Africa
- A. magnareata (FISCHER, 1993) Australia
- A. moniliata (BELOKOBYLSKIJ, 2002) Asiatic Russia
- A. pacifica (BELOKOBYLSKIJ, 2002) Asiatic Russia, Japan
- A. paraclypealis (FISCHER, 1967) U.S.A.
- A. parvicornis (THOMSON, 1895) Europe, Russia
- A. resurrectionis (FISCHER, 1993) Congo
- A. propoglabra (FISCHER, 1993) Ethiopia
- A. rugipropodeum FISCHER, 2003 Republic of South Africa
- A. ryukyuensis (BELOKOBYLSKIJ, 2002) Japan
- A. spasskensis (BELOKOBYLSKIJ, 2002) Asiatic Russia
- A. striatipetiolata FISCHER, 2003 Republic of South Africa
- A. subsurrectionis FISCHER, 2003 Republic of South Africa (assigned to "Synaldis", lapsus calami)
- A. trematosa (FISCHER, 1967) U.S.A.

Apronopa levis sp. n. \bigcirc (Figs 21–32)

Material examined (1 $\,^{\circ}$). – Korea, Kangwon, Kumgang-san, in the woods around Oe-Kumgang resthouse, 24 September 1978, leg. A. VOJNITS et L. ZOMBORI (loc. no. 396). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10970

Holotype is in good condition; left flagellum damaged and with nine flagellomeres, right middle leg glued separately close to first sternum, tarsus of right middle leg broken and partly merged into glue; specimen itself glued on a pointed card by its left middle and hind pair of coxae.

Etymology. - The species name "levis" refers to the entirely smooth second tergite.

Description of the female holotype. – Body 3 mm long. Antenna as long as body and with 30 antennomeres. Flagellomeres short, first flagellomere 1.7 times, second and further flagellomeres 1.2 times and ultimate 5–6 flagellomeres attenuating so that penultimate flagellomere 1.4 times as long as broad; both first flagellomeres concave (deformation of exsiccation?, Fig. 21). – Head in dorsal view (Fig. 22) transverse, just twice as broad as long, eye 1.2 times as long as temple, temple deeply rounded, occiput excavated. Ocelli middle sized, elliptic, OOL 2.5 times as long as POL. Eye in lateral view nearly round, somewhat higher than wide, temple one-third less wide than eye (Fig. 23, see arrows). Mandible 1.6 times as long below as broad between upper and lower teeth, middle tooth pointed, upper tooth less pointed, lower tooth widely rounded (Fig. 24), basal two-thirds of mandible rugulose.

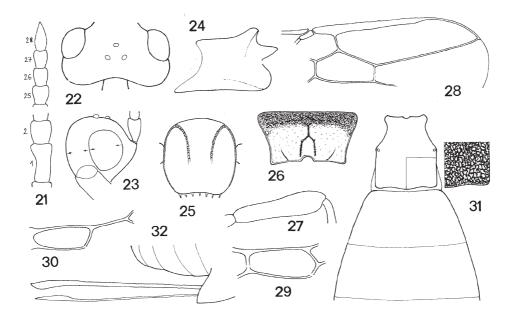
Mesosoma in lateral view stout, as long as high, polished. Pronope missing. Notaulix present, evenly deep on fore half of mesoscutum, subcrenulate (Fig. 25). Mesoscutum anteriorly hairpunctured, here and along notaulix hairy. Precoxal suture short, crenulate, restricted to middle of mesopleuron. Propodeum: anterior quarter (or horizontal part) rugose, posterior three-quarters (or declivous) part

almost smooth, above lunule with areola basalis, pair of spiracles small and close to lateral margin of propodeum (Fig. 26). – Hind femur 3.8 times as long as broad distally (Fig. 27). Hind tibia and tarsus equal in length; hind basitarsus just longer than tarsomeres 2–3 combined.

Fore wing somewhat longer than body. Pterostigma (Fig. 28) cuneiform, 12 times as long as wide basally, progressively narrowing and continueing in metacarpal (I-RI) vein; issuing r basally. Vein r nearly twice as long as width of pterostigma; second submarginal cell fairly short: 3-SR 1.5 times length of 2-SR, SR1 2.7 times as long as 3-SR and reaching tip of wing; 1-RI half as long as pterostigma. Vein m-cu clearly postfurcal. First subdiscal cell closed distally, veins 3-CUI, CUIa and CuIb as in Fig. 29. – Hind wing: cu-a issuing somewhat distally from middle of M + CU + IM (Fig. 30).

First tergite broad (Fig. 31), somewhat longer than broad behind, pair of spiracles just before middle of tergite, dorsope missing, laterope narrow and deep; tergite anteriorly deepened, posteriorly rugose and dispersely hairy. Second tergite transverse, one-fourth shorter than first tergite, border between 2–3 distinct, tergites 2–3 combined 1.5 times as long as first tergite. Second and further tergites polished (i.e. second tergite not sculptured). Hypopygium retracted somewhat posteriorly from middle of metasoma (Fig. 32). Ovipositor sheath as long as hind tibia; ovipositor straight, its posterior end as in Fig. 32.

Body black, second and further tergites with faint brownish tint. Scape and pedicel yellow, flagellum greyish brownish. Mandible and clypeus yellow, palpi pale yellow. Tegula and parategula yellow. Legs vivid yellow. Wings hyaline, pterostigma and veins brown to brownish.



Figs 21–32. Apronopa levis sp. n.: 21 = flagellomeres 1–2 and 25–28, 22 = head in dorsal view, 23 = head in lateral view, 24 = mandible, 25 = mesoscutum with notaulix, 26 = propodeum, 27 = hind femur, 28 = distal part of right fore wing, 29 = first subdiscal cell of fore wing, 30 = subbasal cell of hind wing with cu–a, 31 = tergites 1–3 with indication of the rugositiy of first tergite, 32 = posterior part of metasoma with hypopygium

Male and host unknown.

Distribution: Korea.

The new species, *Apronopa levis*, is near to both species *A. haeselbarthi* VAN ACHTERBERG and *A. ussuricola* BELOKOBYLSKIJ and is differentiated from them by a few features keyed:

- 1 (2) Second tergite baso-medially longitudinally and finely striate (Fig. 22 in VAN ACHTERBERG 1980: 76; Fig. 87:6 in BELOKOBYLSKIJ 1998: 218). Flagellum with long flagellomeres; first flagellomere 2.2 times, second and further flagellomeres 1.7 times as long as broad. Notaulix shallowing on fore half of mesoscutum (Fig. 21 in VAN ACHTERBERG l.c.). Propodeum rugo-rugulose without areola. Hypopygium clearly posteriorly on metasoma (Fig. 10 in VAN ACHTERBERG l.c.). Tegula brown, legs yellowish brown. ♀: 2.4–2.5 mm. − Germany, Slovakia (A. haeselbarthi); Asiatic Russia: Maritime Territory (A. ussuricola)

 A. haeselbarthi VAN ACHTERBERG, 1980, A. ussuricola BELOKOBYLSKIJ, 1998
- 2 (1) Second tergite entirely smooth (Fig. 31). Flagellum with short flagellomeres; first flagellomere 1.7 times, second and further flagellomeres 1.2 times as long as broad (Fig. 21). Notaulix evenly deep on fore half of mesoscutum (Fig. 25). Propodeum anteriorly rugose, posteriorly (or its long declivous part) almost smooth, above lunule with areola basalis (Fig. 26). Hypopygium retracted, somewhat posteriorly from middle of metasoma (Fig. 32). Tegula yellow, legs vivid yellow. ♀: 3 mm. − Korea

 A. levis sp. n.

Synaldis venustula sp. n. ♀ (Figs 33–41)

Material examined (1 $\stackrel{\bigcirc}{\hookrightarrow}$). – Female holotype: Korea, prov. South Pyongan, Mang-yong-dae, 5 August 1971, leg. S. HORVATOVICH et J. PAPP (loc. no. 139). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10971.

Holotype is in good condition, hind left wing somewhat creased; specimen itself glued on a pointed card by mesosternum.

Etymology. – The species name "venustula" refers to the graceful corporal form of the new species.

Description of the female holotype. – Body 1.6 mm long. Antenna as long as head, mesosoma and half metasoma combined and with 15 antennomeres. Flagellomeres 1–2 of equal length and 1.5 times as long as broad (Fig. 33), rest of flagellomeres thick (1.4 times longer than broad), penultimate flagellomere 1.5 times as long as broad. – Head in dorsal view (Fig. 34) subcubic, 1.5 times as broad

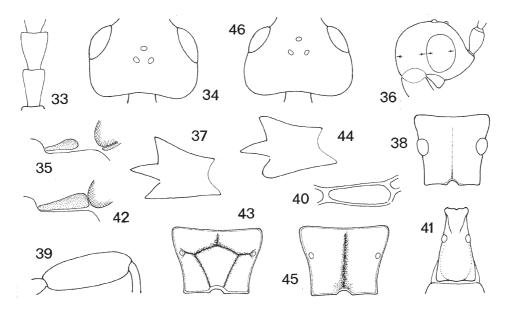
as long, eye as long as temple, temple not bulged and moderately rounded; head 1.6 times broader than mesoscutum between tegulae. Subclypeal (or tentorial) pit short, not reaching compound eye (Fig. 35). Ocelli small, elliptic, OOL nearly three times length of POL. Eye in lateral view nearly round, 1.3 times as high as wide, temple a bit wider than eye (Fig. 36, see arrows). Mandible (Fig. 37) 1.3 times as long as broad between upper and lower teeth, distally broadening, all three teeth pointed. Head polished.

Mesosoma in lateral view 1.4 times as long as high, polished. Notaulix missing also on declivous part of mesoscutum. Mesoscutal dimple missing. Propodeum polished, pair of spiracles large, its distance from fore margin of propodeum a bit longer than diameter of spiracle, medio-longitudinal keel very weak (Fig. 38). Precoxal suture short subcrenulate. – Hind femur fairly thick, 2.9 times as long as broad medially (Fig. 39). Hind tarsus somewhat longer than hind tibia; hind tarsus as long as tarsomeres 2–3 combined.

Fore wing about as long as body. Pterostigma hardly wider than metacarpal vein. Veins r + 3SR relatively short, SR1 2.6 times length of r + 3SR. First subdiscal cell closed, 3CU1 and CU1a thick (Fig. 40).

First tergite (Fig. 41) 1.7 times as long as broad behind, almost evenly broadening posteriorly, pair of spiracles large and before middle of tergite, pair of keels short; first and further tergites polished. Border between tergites 2–3 indistinct. Ovipositor sheath in lateral view short, as long as basitarsus + half of second tarsomere combined.

Ground colour of body brown, propodeum and metasoma light brown, first tergite yellow. Scape, pedicel and flagellomeres 1–2 yellow, flagellum greyish brownish. Mandible yellow, palpi



Figs 33–46. 33–41. *Synaldis venustula* sp. n.: 33 = flagellomeres 1–2, 34 = head in dorsal view, 35 = right subclypeal pit, 36 = head in lateral view, 37 = mandible, 38 = propodeum, 39 = hind femur, 40 = subdiscal cell of fore wing, 41 = first tergite. – 42–44. *Adelphenaldis parvicornis* (THOMSON): 42 = right subclypeal pit, 43 = propodeum, 44 = mandible. – 45–46. *Synaldis jordanica* FISCHER: 45 = propodeum, 46 = head in dorsal view

whitish. Tegula and legs yellow, coxae + trochanters pale yellow. Wings hyaline, pterostigma and veins brownish yellow.

Male and host unknown.

Distribution: Korea.

The new species, *Synaldis venustula*, runs to *S. kangauziensis* BELOKOBYLSKIJ with the help of BELOKOBYLSKIJ's key to the East Palaearctic species of *Synaldis*; the two species are distinguished by the following features keyed:

- 1 (2) Head in dorsal view (Fig. 35 in BELOKOBYLSKIJ 2002: 403) transverse, 1.6 times as broad as long, eye 1.3 times longer than temple. Antenna with 20 antennomeres, first flagellomere 2.5 times as long as broad (Fig. 36 l.c.). First tergite longitudinally striate (Fig. 40 l.c.). Pair of stigma of propodeum small, its diameter 0.4 times as long as its distance from fore margin of propodeum. Hind femur 3.6 times as long as broad medially (Fig. 41 l.c.). Coxae and trochanters brownish yellow. ♀: 2.6 mm. Asiatic Russia (Maritime Territory)

 S. kangauziensis BELOKOBYLSKIJ, 2002
- 2 (1) Head in dorsal view (Fig. 34) subcubic, 1.5 times as broad as long, eye as long as temple. Antenna with 15 antennomeres, first flagellomere 1.5 times as long as broad (Fig. 33). First tergite smooth (Fig. 41). Pair of stigma of propodeum large, its diameter a bit shorter than its distance from fore margin of propodeum (Fig. 38). Hind femur rather thick, 2.9 times as long as broad medially (Fig. 39). Coxae and trochanters pale yellow. ♀: 1.6 mm. − Korea

S. venustula sp. n.

With the help of FISCHER's key (1993: 453–456) the new species runs to *S. parvicornis* (THOMSON) considering their subcubic head, missing mesoscutal dimple, short antenna and short ovipositor sheath, however, the two species are distinguished by clearcut features keyed (in the present papaer *S. parvicornis* is assigned to the genus *Adelphenaldis* FISCHER, see also the chapter "Taxonomic remark" at *A. correcta* sp. n.):

1 (2) Paraclypeal pit large, reaching compound eye (generic difference, Fig. 42). Propodeum areolated, areola basalis five-sided, along carina more or less rugulose, pair of spiracles small (Fig. 43). Hind femur 3.8–4.2 times as long as broad medially. First tergite twice as long as broad behind. Lower tooth of mandible rounded (Fig. 44). Ground colour of body black to brownish black. ♀: 1.6–1.8 mm. – Europe, Russia

Adelphenaldis parvicornis (THOMSON, 1895)

2 (1) Paraclypeal pit short, not reaching compound eye (generic difference, Fig. 35). Propodeum polished, pair of spiracles large (Fig. 38). Hind femur 2.9 times as long as broad medially (Fig. 39). First tergite 1.6 times as long as broad behind (Fig. 41). Lower tooth of mandible pointed (Fig. 37). Ground colour of body brown to light brown with yellow pattern. \$\ointileq\$: 1.6 mm. – Korea S. venustula sp. n.

The new species is similar to *S. jordanica* FISCHER considering their subcubic head, short corporal size and short ovipositor sheath; the two species are easy to distinguish:

1 (2) Propodeum along medio-longitudinal line rugo-rugulose, otherwise propodeum polished, pair of spiracles small (Fig. 45). Temple in dorsal view somewhat bulged and 1.7 times as long as eye, head in dorsal view between temples somewhat broader than between eyes (Fig. 46). Hind femur less thick, four times as long as broad. Antenna with 18 antennomeres, first flagellomere twice as long as broad apically (Fig. 28 in FISCHER 1993: 471). Ground colour of body black. ♀: 1.8 mm. – Jordan

S. jordanica FISCHER, 1993

2 (1) Propodeum polished, pair of spiracles large (Fig. 38). Temple in dorsal view not bulged and as long as eye, head in dorsal view between eyes and temples equal in breadth (Fig. 34). Hind femur thick, 2.9 times as long as broad (Fig. 39). Antenna with 15 antennomeres, first flagellomere 1.5 times as long as broad apically (Fig. 33). Ground colour of body brown to light brown with yellow pattern. ♀: 1.6 mm. − Korea

S. venustula sp. n.

Aspilota turgida sp. n. ♀ (Figs 47–56)

Material examined (1 $\,^{\circ}$). – Female holotype: Korea, Chungbuk, Chungju Sanrim, Hyangsan, 23 May 1993, leg. Deok-Seo Ku. – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10976. Holotype is in good condition: right ovipositor sheath just broken medially; specimen itself glued on a pointed card somewhat laterally by mesosternum (between coxae 1–2) and lowest part of mesopleuron.

Etymology. - The species name "turgida" refers to the bulged temple in dorsal view.

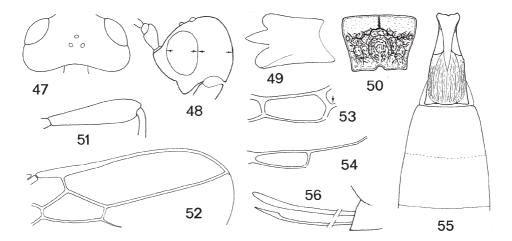
Description of the female holotype. – Body 2.2 mm long. Antenna as long as body and with 16 antennomeres. Flagellum filiform, flagellomeres elongate and hairy (hairs about 2/3rds to 3/4ths length of flagellomeres); first flagellomere 4.5 times as long as broad apically and a bit longer than

second flagellomere, further ones gradually shortening so that penultimate one twice as long as broad. – Head in dorsal view (Fig. 47) transverse, twice as broad as long (across eye + temple) and 1.8 times as broad as long medially; temple bulging, i.e. head between temples broader than between eyes; eye indistinctly longer than temple, occiput excavated. Eye in lateral view 1.5 times as high as wide, temple just wider than eye (Fig. 48, see arrows). Mandible (Fig. 49) 1.4 times as long as broad between upper and lower teeth, middle tooth pointed, upper and lower teeth rounded. Face twice as wide as high, medially without keel or furrow. Paraclypeal pit long clearly reaching compound eye. Head polished, face medially and clypeus hairy.

Mesosoma in lateral view 1.35 times as long as high, polished. Pronope present. Notaulix on declivous part of mesoscutum fairly deep and continuing as a shallowing and less distinct furrow up to middle of mesoscutum, with a few hairs along notaulix. Mesoscutum and scutellum bare, polished. Precoxal suture restricted to middle of mesopleuron, with a few crenulae. Propodeum anteriorly with a transverse carina, beyond it rugose, pair of spiracles middle-sized (Fig. 50). – Hind femur 3.8 times as long as broad distally (Fig. 51). Hind tarsus a bit longer than hind tibia; hind basitarsus equal in length to tarsomeres 2–3 and half of tarsomere 4 combined.

Fore wing as long as body. Pterostigma (Fig. 52) narrow, cuneiform, ten times as long as wide, issuing r from its proximal third, r somewhat longer than width of pterostigma; second submarginal cell fairly long, clearly narrowing distally, 3–SR 1.45 times as long as 2–SR; SR1 long, clearly three times length of 3–SR and reaching tip of wing; metacarp (1–R1) slightly less wide than pterostigma. Vein m–cu clearly postfurcal. First subdiscal cell closed distally, CU1a issuing just posteriorly (Fig. 53?). – Hind wing: cu–a issuing from M+Cu + 1–M just distally from its middle (Fig. 54).

First tergite (Fig. 55) long, weakly broadening posteriorly, twice as long as broad behind, dorsope anteriorly, pair of spiracles at middle of tergite, pair of converging keels merging behind into fine striation of tergite. Border between tergites 2–3 indistinct, somewhat longer than first tergite, together with further tergites polished. Metasoma laterally not compressed. Ovipositor sheath as long as hind tarsomeres 1–2 combined. Ovipositor weakly upcurved, its posterior end as in Fig. 56.



Figs 47–56. Aspilota turgida sp. n.: 47 = head in dorsal view, 48 = head in lateral view, 49 = mandible, 50 = propodeum, 51 = hind femur, 52 = distal part of right fore wing, 53 = subdiscal cell of fore wing, 54 = subbasal cell with M+Cu + I-M + cu-a of hind wing, 55 = tergites 1–3, 56 = hypopygium, ovipositor sheath and ovipositor in lateral view

Head dark brown, meso- and metasoma brown; pronotum, propodeum and first tergite ochre yellow. Scape, pedicel and flagellomeres 1–2 brownish yellow, flagellum brown. Mandible yellow, palpi pale yellow. Tegula and legs yellow, hind tibia and tarsus very faintly darkening. Wings hyaline, pterostigma and veins brownish yellow.

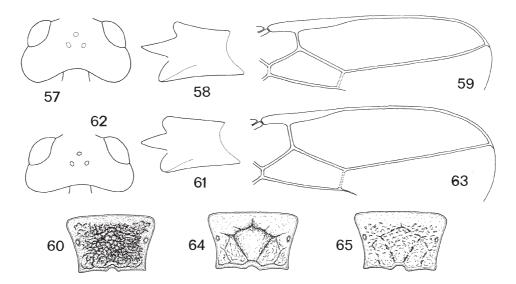
Male and host unknown.

Distribution: Korea.

The new species, *Aspilota turgida*, is nearest to *A. deserta* PAPP considering their bulged temple, length and form of first tergite, distally broadening hind femur and relatively short second submarginal cell; the two species are distinguished by a few features keyed:

1 (2) Male: Head in dorsal view less broad, 1.75 times as broad as long (across eye + temple), temple slightly more bulged and 1.25 times length of eye (Fig. 57). Middle tooth of mandible long and less wide basally, lower tooth less rounded (Fig. 58). Second submarginal cell a bit longer, 3–SR 1.5 times as long as 2–SR (Fig. 59). Propodeum rugo-scrobiculate (Fig. 60). Antenna with 19 antennomeres. Body black, tergites 1–2 reddish yellow. ♂: 2.8 mm. – Mongolia

A. deserta PAPP, 1967



Figs 57–65. 57–60. *Aspilota deserta* PAPP: 57 = head in dorsal view, 58 = mandible, 59 = distal part of right fore wing, 60 = propodeum. – 61–65. *A. inflatitempus* FISCHER: 61 = mandible, 62 = head in dorsal view, 63 = distal part of right fore wing, 64–65 = propodeum

2 (1) Female: Head in dorsal view broad, twice as broad as long (across eye + temple), eye indistinctly longer than temple (Fig. 47). Middle tooth of mandible less long and wide basally, lower tooth rounded (Fig. 49). Second submarginal cell a bit shorter, *3*–*SR* 1.4 times as long as *2*–*SR* (Fig. 52). Propodeum rugose, with a less distinct transverse carina (Fig. 50). Antenna with 16 antennomeres. Body brown to dark brown, first tergite ochre yellow. ♀: 2.2 mm. − Korea

A. turgida sp. n.

With the help of FISCHER's key (1976: 345-357) the new species runs to *A. inflatitempus* FISCHER, however, the two species differ from each other as follows (FISCHER 1974):

1 (2) Upper and lower teeth of mandible equal in size and similarly rounded (Fig. 61). Temple in dorsal view more bulging (Fig. 62). Second submarginal cell long, 3–SR 1.6–1.75 times as long as 2–SR, r 2–2.5 times longer than width of pterostigma (Fig. 63). Propodeum with a five-sided areola basalis, laterally rugulose (Fig. 64), or areola basalis less distinct and propodeum more rugo–rugulose (Fig. 65). Body blackish to black, pronotum with faint rusty suffusion. ♀: 1.6–1.8 mm. – Austria, Hungary, Korea

A. inflatitempus FISCHER, 1974

2(1) Upper and lower teeth of mandible unequal in size, lower tooth greater and widely rounded (Fig. 49). Temple in dorsal view less bulging (Fig. 47). Second submarginal cell less long, *3*–*SR* 1.4 times as long as *2*–*SR*, *r* somewhat longer than width of pterostigma (Fig. 52). Propodeum with a less distinct transverse carina, areola basalis rather rounded (Fig. 50). Body brown to dark brown, pronotum ochre yellow. ♀: 2.2 mm. – Korea

A. turgida sp. n.

ALYSIINAE: DACNUSINI

Antrusa bispinula sp. n. ♀ (Figs 66–72)

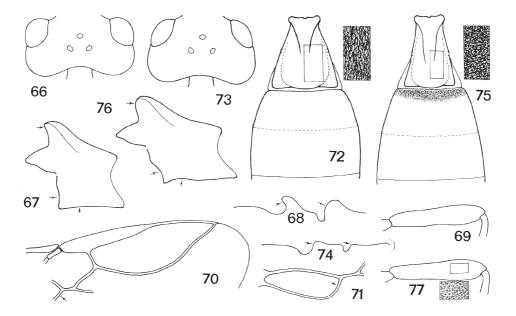
Material examined (1 ♀). – Female holotype: Korea, prov. North Pyongan, Mt. Myohyang, taken at night from the lamps of Myohyang Hotel, 12 September 1980, leg. L. FORRÓ et GY. TOPÁL (loc. no. 652). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10972.

Holotype is in good condition; left antenna damaged: with 25 antennomeres; glued on a pointed card by its mesosternum.

Etymology. – The species name "bispinula" refers to the two spinules on metanotum and on fore margin of propodeum.

Description of the female holotype. – Body 4.1 mm long. Antenna about as long as body and with 34 antennomeres (right antenna). First flagellomere 3.3 times, second flagellomere 2.6 times, middle flagellomeres twice and penultimate flagellomere 1.7 times as long as broad; first flagellomere 1.5 times length of second flagellomere. – Head in dorsal view (Fig. 66) transverse, just 1.9 times as broad as long, eye as long as temple, temple rounded; head between eyes and temples equal in breadth. Ocelli small, elliptic, OOL twice as long as POL. Eye in lateral view 1.7 times as high as wide, temple somewhat wider than eye. Mandible stronghly broadening distally, as long as broad between upper and lower teeth, middle tooth basally wide (Fig. 67). Face 1.75 times as wide as high. Head polished, hairy, face and clypeus densely hairy.

Mesosoma in lateral view 1.4 times as long as high. Pronope small. Notaulix extending to fore half of mesoscutum, narrow, evenly deep, crenulate. Mesoscutal dimple long, fairly deep, crenulate, extending on hind half of mesoscutum. Mesoscutum hairy, hairpunctured, shiny. Precoxal suture wide, crenulate, almost reaching fore margin of mesopleuron. Metanotum and fore margin of propodeum medially with a spinule each (Fig. 68, see arrows). Propodeum rugose without distinct areola, medially with a less distinct transverse carina. – Hind femur 4.5 times as long as broad dis-



Figs 66–77. 66-72. Antrusa bispinula sp. n.: 66 = head in dorsal view, 67 = mandible, 68 = two spinules of metanotum and fore margin of propodeum (see arrows), 69 = hind femur, 70 = distal part of right fore wing with m-cu (?), 71 = subbasal cell of right hind wing, 72 = tergites 1-3 with indication of the sculpture of first tergite. -73-77. Antrusa interstitialis (THOMSON): 73 = head in dorsal view, 74 = metanotum and fore margin of propodeum in lateral view, 75 = tergites 1-3 with indication of the sculpture of first and second tergites, 76 = mandible, 77 = hind femur with indication of its sculpture

tally, smooth (Fig. 69). Hind tarsus one-fifth shorter than hind tibia. Hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing as long as body. Pterostigma wide cuneiform (Fig. 70), four times as long as wide proximally, r just shorter than width of pterostigma; I-RI short, 0.6 times as long as pterostigma and ending before tip of wing, 3-SR + SRI as in Fig. 70.Vein m-cu clearly antefurcal (Fig. 70). First subdiscal cell closed distally. – Hind wing: cu-a issuing posteriorly from middle of M+CU+IM (Fig. 71).

First tergite (Fig. 72) clearly and evenly broadening posteriorly, somewhat longer than broad behind, pair of converging keels distinct anteriorly and merging into longitudinal striation of tergite, striation with much anastomoses, dorsope deep, pair of spiracles at middle of tergite, tergite hairy. Tergites 2–3 slightly longer than first tergite, border between them hardly distinct, third tergite a bit longer than second tergite, together with further tergites polished; tergites 2–5 laterally with some hairs. Ovipositor sheath as long as hind basitarsus.

Body black. Scape yellow, pedicel brown, flagellum brownish black. Mandible testaceous, oral part with palpi pale yellow. Tegula, parategula and legs yellow, hind tibia distally brownish, hind tarsus with blackish suffusion. Wings hyaline, pterostigma brown, veins light brown to yellowish.

Male and host unknown.

Distribution: Korea.

The new species, *Antrusa bispinula*, is nearest to *A. interstitialis* (THOMSON) considering their fairly distinctly broadening first tergite, long-linearform mesoscutal dimpe and rugose propodeum; the two species are differentiated by the features keyed:

1 (2) Female: Temple in dorsal view bulged, i.e. head between temples somewhat broader than between eyes; head in dorsal view less transverse, 1.7 times as broad as long (Fig. 73). Metanotum and fore margin of propodeum without spinule (Fig. 74, see arrows). First tergite 1.4 times longer than broad behind, rugose, second tergite basally rugulose otherwise polished (Fig. 75). Antenna with 27 antennomeres. Mandible somewhat longer than broad between upper and lower teeth as in Fig. 76 (see arrows). Hind femur roughened (Fig. 77). Tegula black, hind tibia darkening brown. ♀: 3 mm. – Europe

A. interstitialis (THOMSON, 1895)

2 (1) Female: Temple in dorsal view not bulged, i.e. head between temples and eyes equally broad; head in dorsal view transverse, 1.9 times as broad as long (Fig. 66). Metanotum and fore margin of propodeum with a spinule (Fig. 68, see arrows). First tergite slightly longer than broad behind, its striation with much anastomoses; second tergite entirely polished (Fig. 72). Antenna with 34 antennomeres. Mandible as long as broad between upper and lower teeth as in Fig. 67 (see arrows). Hind femur smooth, shiny (Fig. 69). Tegula and hind tibia yellow. ♀: 4.1 mm. − Korea

A. bispinula sp. n.

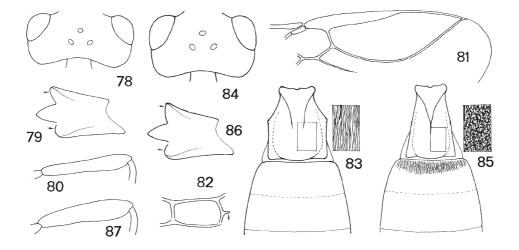
Antrusa dilata sp. n. ♀ (Figs 78–83)

Material examined (1 \updownarrow). – Female holotype: Korea, prov. South Pyongan, Pyongyan, city Park, 4 August 1971, leg. S. Horvatovich et J. Papp (loc. no. 137). – Holotype is deposited in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10973. Holotype is in good condition, fore and middle legs glued close near to mesosoma, specimen itself glued on a pointed card by its left-lateral half of mesosternum + left-lower part of mesopleuron.

Etymology. – The species name "dilata" refers to the distinctly transverse head in dorsal view.

Description of the female holotype. – Body 2.1 mm long. Antenna one-third longer than body and with 26 antennomeres. First flagellomere 3.6 times, middle flagellomeres 2.2 times and penultimate flagellomere twice as long as broad; first flagellomere a bit longer than second flagellomere. – Head in dorsal view (Fig. 78) transverse, twice as broad as long, eye 1.4 times as long as temple, temple rounded. OOL almost twice as long as POL. Eye in lateral view 1.7 times as high as wide, temple 0.8 times as wide as eye. Mandible 1.65 times length to breadth between upper and lower teeth, upper and lower teeth rounded (see arrows in Fig 79), middle tooth spiky. Head polished.

Mesosoma in lateral view 1.4 times as long as high, polished. Pronope present. mesoscutum hairy, laterally bare; mesoscutal dimple shallow, i.e. less distinct. Precoxal suture missing. Propodeum uneven, laterally subrugulose-uneven, subshiny. – Hind femur 5.5 times as long as broad distally (Fig. 80). Hind tibia slightly longer than hind tarsus. Hind basitarsus as long as tarsomeres 2–3 and one-third of 4th tarsomere combined.



Figs 78–87. 78–83. *Antrusa dilata* sp. n.: 78 = head in dorsal view, 79 = mandible, 80 = hind femur, 81 = distal part of right fore wing, 82 = first subdiscal cell of right fore wing, 83 = tergites 1–3 with indication of the sculpture of first tergite. – 84–87. *Antrusa lathyri* (GRIFFITHS): 84 = head in dorsal view, 85 = tergites 1–3 with indication of the sculpture of tergites 1–2, 86 = mandible, 87 = hind femur

Fore wing distinctly one-third longer than body. Pterostigma (Fig. 81) cuneiform and almost parallel-sided, 6.6 times as long as wide, issuing r near to its base, r a bit longer than width of pterostigma. l–R1 one-fourth shorter than length of pterostigma. First subdiscal cell short, distally close, CU1a issuing medially (Fig. 82).

First tergite (Fig. 83) short and broad, 1.25 times as long as broad behind, pair of spiracles at middle of tergite, tergite up to spiracles clearly broadening, beyond them parallel-sided; pair of keels weak, converging and merging into fine striation of tergite. Tergites 2–3 just shorter than first tergite, together with further tergites polished. Ovipositor sheath short, in lateral view as long as hind tarsomeres 3–4 combined.

Head, mesosoma and first tergite brownish black, metasoma light brown (or yellowish brown). Scape + pedicel brownish yellow, flagellum brownish greyish. Mandible yellow, palpi pale yellow. Tegula yellow. Legs yellow, coxae + trochanters pale yellow. Wings hyaline, pterostigma and veins brownish yellow.

Male and host unknown.

Distrtibution: Korea.

The new species, *Antrusa dilata*, is nearest to *A. lathyri* (GRIFFITHS) considering their relatively large corporal size, broad petiole (or first tergite) and fairly dense hairs of second tergite; the two species are distinguished by the following features:

1 (2) Propodeum rugose. Head in dorsal view (Fig. 84) less transverse, 1.7–1.8 times as broad as long, eye slightly longer. First tergite evenly broadening postertiorly, second tergite basally striolate (Fig. 85). Upper tooth of mandible spiky, lower tooth more rounded (Fig. 86, see arrows). Precoxal suture wide and rugose-costate. Hind femur relatively thick, 4.2 times as long as broad distally (Fig. 87). ♀♂: 2.7–2.9 mm. – Germany, Hungary

A. lathyri (GRIFFITHS, 1984) comb. n.

2 (1) Propodeum uneven, laterally subrugulose-uneven, subshiny. Head in dorsal view (Fig. 78) twice as broad as long, eye 1.6 times as long as temple. First tergite beyond pair of spiracles parallel-sided, second tergite polished (Fig. 83). Upper and lower teeth of mandible rounded (Fig. 79, see arrows). Precoxal suture mising. Hind femur less thick, 5.5 times as long as broad distally (Fig. 80). ♀: 2.1 mm. − Korea

A. dilata sp. n.

Dacnusa (Pachysema) luctuosa sp. n. ♂ (Figs 88–95)

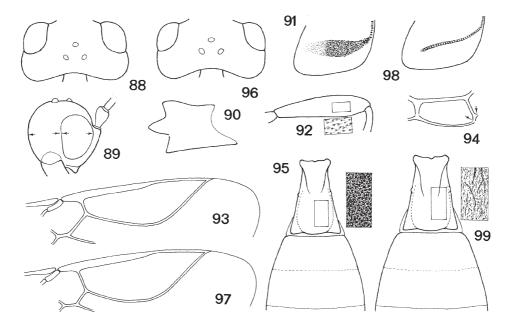
Material examined (1 \circlearrowleft). – Male holotype: Korea, prov. Ryang-gang, Chann-Pay plateau, 24 km NW from Sam-zi-yan, swept along the road to Mt. Pektu, 2000 m, 24 July 1975, leg. J. PAPP et A. VOJNITS (loc. no. 281). – Holotype is deposited in the Hungarian Natural History Museum (Depart-

ment of Zoology), Budapest, Hym. Typ. No. 10974. Holotype is in good condition, right antenna apically damaged: with 19 antennomeres.

Etymology. - The species name "luctuosa" refers to the dark coloured body.

Description of the male holotype. – Body 1.8 mm long. Antenna as long as body and with 22 antennomeres. First flagellomere twice, second flagellomere 1.8 times, middle flagellomeres also 1.8 times and penultimate flagellomere 1.6 times as long as broad. First flagellomere hardly 1.2 times longer than second flagellomere. – Head in dorsal view (Fig. 88) transverse, 1.8 times as broad as long, temple slightly bulged: head between temples slightly broader than between eyes, eye 1.35 times as long as temple, temple rounded, occiput excavated. Ocelli small, elliptic, fairly far from each other, OOL one-third longer than POL. Eye in lateral view 1.6 times as high as wide, temple as wide as eye (Fig. 89, see arrows). Mandible 1.3 times as long below as broad between upper and lower teeth, middle tooth less pointed (Fig. 90). Face 1.5 times as wide below as high, inner margin of eyes somewhat diverging ventrally. Head polished; face laterally, clypeus and hind part of gena (above mandible) hairy, occiput with disperse hairs.

Mesosoma in lateral view 1.4 times as long as high. Notaulix extended hardly to fore third of mesoscutum, evenly deep and subcrenulate. Pronope distinct. Mesoscutum polished, hairy on its declivous fore part; notaulix indicated by a few hairs; mesoscutal dimple fairly large, round, deep.



Figs 88–99. 88–95. *Dacnusa (Pachysema) luctuosa* sp. n.: 88 = head in dorsal view, 89 = head in lateral view, 90 = mandible, 91 = ventral half of mesopleuron with precoxal suture, 92 = hind femur with indication of its sculpture, 93 = distal part of right fore wing, 94 = first subdiscal cell of fore wing, 95 = tergites 1–3 with indication of the sculpture of first tergite. – 96–99. *Dacnusa (Pachysema) arkadii* TOBIAS: 96 = head in dorsal view, 97 = distal part of right fore wing, 98 = ventral half of mesopleuron with precoxal suture, 99 = tergites 1–3

Mesopleuron also polished, precoxal suture wide, not reaching fore margin of mesopleuron, rugulose (Fig. 91). Propodeum and metapleuron above and below densely rugulose with rugose element, metapleuron medially polished; propodeum and metapleuron less hairy. – Hind femur 4.1 times as long as broad distally, its outer side with disperse hairpunctures (Fig. 92). Hind tibia as long as hind tarsus; hind basitarsus as long as tarsomeres 2–4 combined.

Fore wing somewhat longer than body. Pterostigma (Fig. 93) cuneiform, parallel-sided and nearly 13 times as long as wide, issuing r near from its base, r slightly longer than width of pterostigma, 2–SR 2.8 times length of r; 3–SR + SR1 bent and ending far before tip of wing; 1–R1 0.6 times as long as pterostigma. Vein m–cu clearly antefurcal (Fig. 93). Outer-lower side of subdiscal cell closed, i.e. veins 3CU1 + CU1b present, CU1a issuing clearly posteriorly (Fig. 94, see arrows).

First tergite (Fig. 95) evenly broadening posterioly, 1.4 times as long as broad behind, pair of spiracles at middle of tergite, pair of less converging and less distinct keels merging medially into rugo-rugulosity. Tergites 2–3 fused and as long as first tergite, together with further tergites polished.

A dark coloured species. Scape and pedicel black with weak rusty tint; flagellum blackish. Head, mesosoma and first tergite black, metasoma dark brown. Mandible brownish yellow, oral parts pale yellow. Tegula dark brown, parategula brown. Coxae dark brown, trochanters yellow, fore femur basally, femora 2–3 entirely brown, tibiae 2–3 distally and tarsi 1–3 brown to light brown, rest of legs yellow to yellowish. Wings hyaline, pterostigma and veins brownish.

Female and host unknown.

Distribution: Korea.

The new species, *Dacnusa (Pachysema) luctuosa*, runs to *D. (P.) arkadii* TOBIAS with the help of TOBIAS's key (1998: 324–354): mesoscutum less hairy, precoxal suture distinct, notaulix present on fore third of mesoscutum; however, the two species are separated clearly by the features keyed:

- 1 (2) Temple in dorsal view not bulged, i.e. head between temples and eyes equally broad; head twice as broad as long (Fig. 96). Vein *r* 2.8 times as long as width of pterostigma, 2–*SR* 0.7 times length of *r* (Fig. 97). Hind tibia longer than tarsus. Precoxal suture finely crenulate (Fig. 98). Antenna with 26–28 antennomeres, middle flagellomeres 2.2–2.3 times as long as broad. First tergite somewhat broader in general, 1.25 times as long as broad behind, finely sculptured (Fig. 99). Legs yellow or brownish. ♂: 1.7–2.2 mm. Asiatic Russia (Kuril Islands)

 D. (P.) arkadii TOBIAS, 1997
- 2 (1) Temple in dorsal view bulged, i.e. head between temples slightly broader than between eyes; head 1.8 times as broad as long (Fig. 88). Vein *r* a bit longer than width of pterostigma, 2–*SR* 2.8 times length of *r* (Fig. 93). Hind tibia and tarsus equal in length. Precoxal suture rugulose (Fig. 91). Antenna with 22 antennomeres, middle flagellomeres 1.9–1.8 times as long as broad. First tergite somewhat less broad in general, 1.35 times as long as broad behind, rugo-rugulose (Fig. 95). Legs dark brown to brown with less yellow pattern. $3 \cdot 1.8 \text{ mm.}$ Korea

30 Papp, J.

The new species is related to *D.* (*P.*) fraterna TOBIAS considering their similar features like *D.* (*P.*) arkadii, the two species are discriminated as follows:

- 1 (2) Hind tarsus shorter than hind tibia. Temple in dorsal view not bulged, i.e. head between eyes and temples equally broad. Antenna with more than 25 antennomeres (quotation after TOBIAS 1998: 341). Middle tooth of mandible pointed. Legs brownish yellow. 3: 1.7 mm. Asiatic Russia (Maritime Territory)

 D. (P.) fraterna TOBIAS, 1998
- 2 (1) Hind tarsus and tibia of equal length. Temple in dorsal view slightly bulged, i.e. head between temples slightly broader than between eyes (Fig. 88). Antenna with 22 antennomeres. Middle tooth of mandible less pointed (Fig. 90). Legs dark brown to brown with less yellow pattern. ♂: 1.8 mm. − Korea

D. (P.) luctuosa sp. n.

Dacnusa (Pachysema) reno sp. n. ♀ (Figs 100–106)

Material examined (2 $\,^{\circ}$). – Female holotype: Korea, Kangwon, Mt. Solak Paekdansa, 25 May 1993, leg. D.-S. Ku. – Female paratype: Korea, Kangwon, Kosong Kansong, Konbongsa, 26 May 1993, leg. D.-S. Ku.

Holotype is deposited in the Coll. Ku (Sancheong, Republic of Korea), paratype is in the Hungarian Natural History Museum (Department of Zoology), Budapest, Hym. Typ. No. 10975.

Holotype and paratype are in good conditon, both specimens glued on a pointed card by its right mesopleuron (holotype) and its coxae 2–3 (paratype).

Etymology. - The species name "reno" is a phantasy name.

Description of the female holotype. – Body 2.1mm long. Antenna as long as body and with 24 antennomeres. First flagellomere 4.6 times, second flagellomere 4 times, middle flagellomeres 2.7–2.5 times and penultimate flagellomere twice as long as broad. First flagellomere 1.15 times as long as second flagellomere. – Head in dorsal view (Fig. 100) transverse, 1.9 times as broad as long, eye 1.4 times length of temple, occiput excavated. Ocelli small, elliptic, OOL almost three times as long as POL. Eye in lateral view twice as high as wide, temple a bit wider than eye (Fig. 101, see arrows). Mandible broadening distally, somewhat longer than broad between upper and lower teeth, middle tooth pointed (Fig. 102). Face almost twice as wide as high, laterally hairy, head otherwise polished and bare.

Mesosoma in lateral view 1.2 times as long as high. Pronope small and round, less deep. Mesoscutum almost evenly hairy; notaulix faintly distinct on fore declivous part of mesoscutum; mesoscutal dimple deep linearform. Precoxal suture finely crenulate and reaching epicnemial suture. Propodeum rugulose and densely hairy. – Hind femur 4.6 times as long as broad distally (Fig. 103). Hind tibia and tarsus equal in length. Hind basitarsus as long as tarsomeres 2–3 + half of fourth tarsomere combined.

Fore wing one-sixth longer than body. Pterostigma (Fig. 104) cuneiform, parallel-sided and fairly wide, nine times as long as wide, issuing r near from its base, r almost twice as long as width of pterostigma and longer than 2–SR (Fig. 104, see left pair of arrows); 3–SR + SRI bent and ending far before tip of wing (see right horizontal arrow in Fig. 104); I–RI just less than half as long as pterostigma. Vein m–cu antfurcal. Outer-lower side of first subdiscal cell closed, i.e. veins 3–CUI+CUIb present (Fig. 105, see arrows). – Hind wing: cu–a issuing distally from M–CU + I–M.

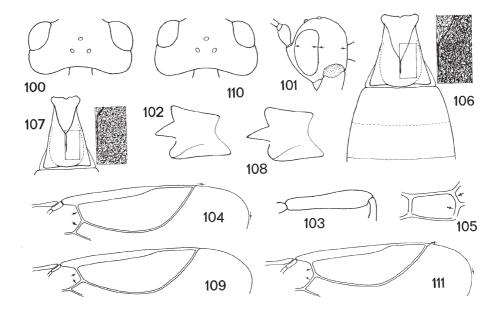
Firs tergite (Fig. 106) strongly broadening posteriorly, 1.2 times as long as broad behind, basal and converging pair of keels distinct and reaching middle of tergite, dorsope and laterope present, tergite evenly and densely rugulose, hairy. Further tergites transverse, second tergite somewhat longer than third tergite, border between them distinct (Fig. 106). Hypopygium fairly large, pointed; ovipositor sheath short, as long as hind tarsomeres 3–4 combined.

Antenna bicolourous, scape and pedicel yellow, flagellum ventrally (or anteriorly) yellow and dorsally (or posteriorly) brownish. Head black with weak rusty tint. Mesosoma and first tergite black. Metasoma brown to dark brown. Legs bright yellow. Wings subhyaline, pterostigma and veins light brown.

Description of the female paratype. – Similar to the female holotype. Body 2.1 mm long. Antenna with 25 antennomeres. Head in dorsal view 1.9 times as broad as long. First tergite slightly more broadening posteriorly, i.e. 1.1 times as long as broad behind.

Male and host unknown.

Distribution: Korea.



Figs 100–111. 100–106. Dacnusa (Pachysema) reno sp. n.: 100 = head in dorsal view, 101 = head in lateral view, 102 = mandible, 103 = hind femur, 104 = distal part of right fore wing, 105 = first subdiscal cell of right fore wing, 106 = tergites 1–3 with indication of the sculpture of first tergite. – 107–109. Dacnusa (Pachysema) laeta Nixon: 107 = first tergite with indication of its sculpture, 108 = mandible, 109 = distal part of right fore wing. – 110–111. Dacnusa (Pachysema) faeroeensis (ROMAN): = head in dorsal view, 111 = distal part of right fore wing

With the help of TOBIAS's key (1998: 324–354) to the *Dacnusa* species of Far East of Asiatic Russia the new species, *D. (P.) reno*, runs to *D. (P.) sublaeta* TOBIAS and the two species are distinguished by the features keyed:

1 (2) Female: Eye in dorsal view as long as temple. First tergite less broadening posteriorly, 1.5 times as long as broad behind, unevenly rugose. Vein *r* as long as width of pterostigma. Mesoscutum anteriorly and between notauli hairy, laterally bare. Hind tibia somewhat longer than hind tarsus. Hind femur 5.5 times as long as broad distally. Flagellum dark coloured. Legs brownish yellow; coxae, hind tibia apically and hind tarsus entirely brownish. ♀: 1.7 mm. – Asiatic Russia (Maritime Territory, Sakhalin, Kuril Islands)

D. (P.) sublaeta TOBIAS, 1998

2 (1) Female: Eye in dorsal view 1.4 times as long as temple (Fig. 100). First tergite more broadening posteriorly, 1.1–1.2 times as long as broad behind, evenly rugulose (Fig. 106). Vein *r* longer than width of pterostigma (Fig. 104). Mesoscutum almost entireley and evenly hairy. Hind tibia and tarsus equal in length. Hind femur 4.6 times as long as broad distally (Fig. 103). Flagellum bicolorous: ventrally yellow and dorsally brownish. Legs bright yellow. ♀: 2.1 mm. − Korea **D. (P.) reno** sp. n.

The new species is nearest to D. (P.) laeta NIXON considering their common features as presence of precoxal suture, short marginale (or radial) cell and antefurcal recurrent vein (m-cu) (NIXON 1948: 221); the discrimination of the two species is presented subsequently:

- 1 (2) Female: First tergite less broadening posteriorly, 1.4 times length of hind breadth (Fig. 107). Mandible broadening, middle tooth slightly more pointed (Fig. 108). Vein *r* as long as 2–*SR*, *r* a bit longer than width of pterostigma (Fig. 109, see arrows). Mesoscutum hairy anteriorly. Flagellum unicolorous greyish brownish except bright yellow first flagellomere. ♀: 2–2.4 mm. Ireland, Germany, Austria, Poland, Hungary

 D. (P.) laeta NIXON, 1954
- 2 (1) Female: First tergite more broadening posteriorly, 1.2 times as long as broad behind (Fig. 106). Mandible a bit more broadening, middle tooth slightly less pointed (Fig. 102). Vein *r* longer than 2–*SR*, *r* nearly twice longer than width of pterostigma (Fig. 104, see pair of arrows). Mesoscutum almost entirely and evenly hairy. Flagellum bicolorous, ventrally (or anteriorly) yellow and dorsally (or posteriorly) brownish. ♀: 2.1 mm. − Korea **D. (P.) reno** sp. n.

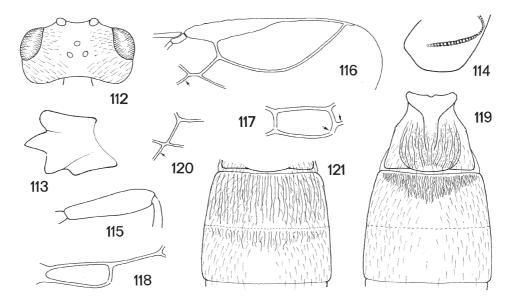
The new species is reminding of *D. (D.) faeroeensis* (ROMAN) considering their strongly broadening first tergite and hairy propodeum + first tergite, however, they are distinguished by the features as follows:

1 (2) Temple in dorsal view bulged, i.e. head in dorsal view somewhat broader between temples than between eyes (Fig. 110). 2–SR longer than r, marginal cell ending somewhat less far from tip of wing (Fig. 111, see arrows). Antenna with 21–23 antennomeres. Hind coxa, at most basally, blackish to black. ♀: 2–2.1 mm. – Palaearctic Region

D. (D.) faeroeensis (ROMAN, 1917)

2 (1) Temple in dorsal view not bulged, i.e. head in dorsal view evenly broad between eyes and temples (Fig. 100). 2–*SR* shorter than *r*, marginal cell ending far from tip of wing (Fig. 104, see arrows). Antenna with 24–25 antennomeres. Hind coxa bright yellow. ♀: 2.1 mm. − Korea

D. (**P.**) reno sp. n.



Figs 112–121. *Epimicta longicaudalis* TOBIAS: 112 = head in dorsal view, 113 = mandible, 114 = ventral half of mesopleuron with precoxal suture, 115 = hind femur, 116 = distal part of right fore wing, 117 = first subdiscal cell of right fore wing, 118 = subbasal cell of right hind wing with cu—a and M+CU+I-M, 119 = tergites 1–3 with less striation, 120 = middle veins of right fore wing with m–cu (?), 121 = tergites 2–3 with more striations

Epimicta longicaudalis TOBIAS, ♂ (Figs 112–121)

Epimicta longicaudalis Tobias, 1998: 312 ♀♂, type locality: Primorski Krai, Novitzkoe (Asiatic Russia)

Material examined: Four male specimens: Korea, Kangwon, Mt. Solak Oknyotang, 27 May 1993, leg. D.-S. Ku. – Two male specimens are in the Coll. Ku (Sancheong, Republic of Korea), two male specimens in the Hungarian Natural History Museum (Department of Zoology), Budapest.

The species has been described on the basis of 26 female and 4 male specimens within the key to the two *Epimicta* species known so far in the Asiatic Russia. An extended redescription of the male form is presented subsequently.

Redescription of the male. – Body 2.5 mm long. Antenna as long as body and with 28 (3 \circlearrowleft) and 29 (1 \circlearrowleft) antennomeres. First flagellomere clearly three times, second flagellomere 2.3 times, median flagellomere twice to 1.8 times and penultimate flagellomere also 1.8 times as long as broad. First flagellomere 1.35 times longer than second flagellomere. – Head in dorsal view (Fig. 112) transverse, 1.9 times (3 \circlearrowleft) and twice (1 \circlearrowleft) as broad as long, eye 1.4 times as long as temple, temple rounded, occiput excavated; head 1.5 times as broad as mesoscutum between tegulae; occili small, elliptic, OOL nearly three times as long as POL. Eye in lateral view 1.4 times as high as wide, temple somewhat less wide than eye. Mandible (Fig. 113) as long medially as broad between upper and lower teeth, upper tooth widely rounded, middle tooth pointed, third and fourth teeth small. Face wide, 2.6 times wider (close above clypeus) than high medially, inner margin of eyes somewhat diverging ventrally. Head polished, face hairy; frons, vertex and occiput with fairly disperse hairs, hairs of frons shorter than hairs of vertex and occiput (Fig. 112).

Mesosoma in lateral view 1.4 times as long as high. Pronope round, large and deep. Notaulix restricted to declivous fore part of mesoscutum. Mesoscutum and scutellum evenly hairy. Mesopleuron polished, precoxal suture present as a narrow and linearform furrow almost reaching fore margin of mesopleuron, sebcrenulate (Fig. 114), or precoxal suture fairly wide, rugulose (2 ♂). Propodeum rugose, pair of spiracles small. − Hind femur 3.8 times as long as broad distally (Fig. 115). Hind tarsus slightly shorter than hind tibia. Hind basitarsus just shorter than tarsomeres 2−3 combined.

Fore wing as long as body. Pterostigma (Fig. 116) wide and narrowing distally, five times as long as wide and issuing r proximally from its middle; I-RI 0.75 times as long as pterostigma, 3-SR + SRI ending before tip of wing, SRI almost straight. Vein m-cu antefurcal (3 \circlearrowleft , Fig. 116, see arrow), or m-cu just antefurcal (1 \circlearrowleft , Fig. 120, see arrow). First subdiscal cell closed distally, CUIa issuing somewhat posteriorly from outer vein (3-CUI+CUIb) of cell (Fig. 117, see arrows). – Hind wing: cu-a issuing somewhat distally from middle of M+CU+I-M (Fig. 118).

First tergite broad (Fig. 119), one-fifth broader behind then long, pair of spiracles before middle of tergite, beyond spiracles tergite somewhat less broadening, pair of keels strong and posteriorly merging into longitudinal striation. Second tergite transverse, almost twice as broad behind as long, third tergite as long as second tergite and tergites 2–3 1.5 times length of first tergite, border between them hardly distinct, second tergite anteriorly with fine striation, further tergites polished and hairy (Fig. 119), or second tergite entirely and third tergite basally striolate (Fig. 121).

Head, mesosoma and first tergite dark brown to brown, metasoma brownish yellow. Scape yellowish, pedicel light brown, flagellum brownish. Mandible and clypeus yellow, palpi pale yellow. Tegula light yellow. Legs yellow, hind tibia and all tarsi faintly brownish, or hind tibia + tarsus dark brownish (1 3). Head, prosoma, mesopleuron and mesosternum brownish yellow (1 3). Tergites 2–3 hairy as in Fig. 121. Wings hyaline, pterostigma brown, veins brownish.

Distribution: Asiatic Russia (Jewish Autonomous Region, Primorski Krai), Korea.

*

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REFERENCES

- ACHTERBERG, C. VAN (1976) A new species of Tanycarpa Foerster from England (Hymenoptera, Braconidae, Alysiinae). *Entomologische Berichte* **36**: 12–15.
- ACHTERBERG, C. VAN (1980) Three new Palaearctic genera of Braconidae (Hymenoptera). *Entomologische Berichte* **40**: 72–80.
- ACHTERBERG, C. VAN (1993) Illustrated key to the subfamilies of the Braconidae (Hymenoptera: Ichneumonoidea). *Zoologische Verhandelingen Leiden* **283**: 1–189.
- BELOKOBYLSKIJ, S. A. (1998) Tribe Alysiini. In: Key to the Insects of Russian Far East. Vol. IV. Neuropteroidea, Mecoptera, Hymenoptera, Pt. 3: 163–298. [In Russian]
- BELOKOBYLSKIJ, S. A. (2002) East Palaearctic species of the braconid wasp genus Synaldis Förster (Hymenoptera, Braconidae, Alysiinae) species without mesoscutal pit. *Entomologicheskoye Obozrenie* **81**(2): 394–416. [In Russian with English title and summary]
- BELOKOBYLSKIJ, S. A. (2004a) East Palaearctic species of braconid wasp of the genus Synaldis Förster (Hymenoptera, Braconidae, Alysiinae). Species with developed mesoscutal pit. I. *Entomologicheskoye Obozrenie* **83**(1): 214–242. [In Russian with English title and summary]
- BELOKOBYLSKIJ, S. A. (2004b) East Palaearctic species of braconid wasps of the genus Synaldis Förster (Hymenoptera, Braconidae, Alysiinae). Species with developed mesoscutal pit. II. *Entomologicheskoye Obozrenie* **83**(4): 881–893. [In Russian with English title and summary]
- BELOKOBYLSKIJ, S. A. & TOBIAS, V. I. (1997) On the braconid wasps of the subfamily Alysiinae (Hymenoptera, Braconidae) from Kuril Islands. *Far Eastern Entomologist* **47**: 1–17.
- CHEN, J. & WU, ZH. (1994) The Alysiini of China (Hymenoptera: Braconidae: Alysiinae). *China Agriculture Press* 178 pp. + 40 tables. [In Chinese with English abbreviated text on pp. 154–168.]
- FISCHER, M. (1961) Zwei neue Pachysema-Arten (Hym., Braconidae, Dacnusinae). *Nachrichten-blatt der Bayerischen Entomologen* **10**(3): 21–25.
- FISCHER, M. (1962) Das Genus Synaldis Förster (Hymenoptera, Braconidae). *Mitteilungen aus dem Zoologischen Museum in Berlin* **38**(1): 1–21.
- FISCHER, M. (1967) Die nearktischen Arten der Gattung Synaldis Foerster (Hymenoptera, Braconidae, Alysiinae). *Polskie Pismo Entomolgiczne* **37**(3): 431–472.
- FISCHER, M. (1974) Einige neue Aspilota-Arten aus Niederösterreich (Hymenoptera: Braconidae, Alysiinae). Folia Entomologica Hungarica 27: 59–71.
- FISCHER, M. (1976) Erste Nachweise von Aspilota-Wespen im Burgenland (Hymenoptera, Braconidae, Alysiinae). *Annalen des Naturhistorischen Museums in Wien* **80**: 343–410.

- FISCHER, M. (1993) Zur Formenvielfalt der Kieferwespen der Alten Welt: Über die Gattungen Synaldis Foerster, Trisynaldis Fischer und Kritscherysia Fischer gen. nov. (Hymenoptera, Braconidae, Alysiinae). *Annalen des Naturhistorischen Museums in Wien* **94–95B**: 451–490.
- FISCHER, M. (2003) Ein Beitrag zur Kenntnis der Gattung Synaldis Foerster und Adelphenaldis Fischer, gen. nov. (Hymenoptera, Braconidae, Alysiinae). *Linzer biologische Beiträge* **35**(1): 19–74.
- GRIFFITHS, G. C. D. (1967*a*) The Alysiinae (Hym. Braconidae) parasites of Agromyzidae (Diptera) II. The parasites of Agromyza Fallén. *Beiträge zur Entomologie* **16**(5–6) (1966): 551–605.
- GRIFFITHS, G. C. D. (1967b) The Alysiinae (Hym. Braconidae) parasites of Agromyzidae (Diptera) III. The parasites of Paraphytomyza Enderlein, Phytagromyza Hendel and Phytomyza Fallén. Beiträge zur Entomologie **16**(7–8) (1966): 775–951.
- GRIFFITHS, G. C. D. (1967c) The Alysiinae (Hym. Braconidae) parasites of Agromyzidae (Diptera) IV. The parasites of Hexomyza Enderlein, Melanagromyza Hendel, Ophiomyia Braschnikov and Napomyza Westwood. *Beiträge zur Entomologie* 17(5–8): 653–696.
- GRIFFITHS, G. C. D. (1984) The Alysiinae (Hym. Braconidae) parasites of Agromyzidae (Diptera) VII. Supplement. *Beiträge zur Entomologie* **34**(2): 343–362.
- NIXON, G. E. J. (1948) A revision of the European Dacnusini (Hym., Braconidae, Dacnusinae). *The Entomologist's Monthly Magazine* **84**: 207–224.
- NIXON, G. E. J. (1954) A revision of the European Dacnusini (Hym., Braconidae, Dacnusinae). *The Entomologist's Monthly Magazine* **90**: 257–290.
- PAPP, J. (1967) A synopsis of the Phaenocarpa Först. species of the Oriental Region (Hymenoptera, Braconidae, Alysiinae). *Reichenbachia* 8(20): 139–157.
- PAPP, J. (1989) Braconidae (Hymenoptera) from Korea, XI. Acta Zoologica Academiae Scientiarum Hungaricae 35(3–4): 295–326.
- PAPP, J. (1990a) Braconidae (Hymenoptera) from Korea, XII. Acta Zoologica Academiae Scientiarum Hungaricae 36(1–2): 87–119.
- PAPP, J. (1990b) Braconidae (Hymenoptera) from Korea, XIII. Acta Zoologica Academiae Scientiarum Hungaricae 36(3–4): 319–330.
- PAPP, J. (1992) Braconidae (Hymenoptera) from Korea, XIV. *Acta Zoologica Academiae Scientiarum Hungaricae* **38**(1–2): 63–73.
- PAPP, J. (1994) Braconidae (Hymenopter) from Korea, XV. Acta Zoologica Academiae Scientiarum Hungaricae 40(1-2): 133-156.
- PAPP, J. (1996) Braconidae (Hymenoptera) from Korea, XVIII. *Annales historico-naturales Musei nationalis hungarici* **88**: 145–170.
- PAPP, J. (2001) Braconidae (Hymenoptera) from Korea, XX. *Acta Zoologica Hungarica* **47**(1): 1–13. PAPP, J. (2003) Braconidae (Hymenoptera) from Korea, XXI. *Acta Zoologica Hungarica* **49**(2):
- PAPP, J. (2004) A monograph of the braconid fauna of the Bakony Mountains (Hymenoptera, Braconidae) V. Agathidinae, Alysiinae. *Folia Musei historico-naturales Bakonyiensis* 21:
- 111–154. [In Hungarian with English title and abstract.]
 PAPP, J. (2005) Braconidae (Hymenoptera) from Mongolia, XV. Acta Zoologica Academiae
 Scientiarum Hungaricae 51(3): 221–251.
- SHENEFELT, R. D. (1974) Braconidae 7. Alysiinae. Hymenopterorum Catalogus 11: 937–1113.
- TAKADA, H. (1977) Descriptions of two new species of the genus Dacnusa Haliday from Japan (Hymenoptera: Braconidae). *Akitu* 11: 1–5.
- TELENGA, N. A. (1934) Übersicht der aus USSR bekannten Arten der Unterfamilie Dacnusinae (Braconidae, Hymenoptera). *Bulletin Societé Naturelle Luxembourg* **44**(12): 107–125.

- TOBIAS, V. I. (1962) Contribution to the fauna of the subfamily Alysiinae (Hymenoptera, Braconidae) of the Leningrad Region. *Trudy Zoologicheskago Instituta* **31**: 81–137. [In Russian with English title]
- TOBIAS, V. I. (1971) Review of the Braconidae (Hymenoptera) of the USSR. *Trudy Vsesoyuznavo Entomologicheskago Obshestva* **54**: 156–268. [In Russian]
- TOBIAS, V. I. (1986) 27. ordo Hymenoptera, family Braconidae. (2.). Key to the Insects of the European Part of the USSR III. Hymenoptera 5: 1–309. [In Russian]
- TOBIAS, V. I. (1998) Tribe Dacnusini. In: Key to the Insects of Russian Far East, Vol. IV. Neuropteroidea, Mecoptera, Hymenoptera, Pt. 3: 299–411. [In Russian]
- WHARTON, R. A. (1985) Characterization of the genus Aspilota (Hymenoptera: Braconidae). Systematic Entomology 10: 227–237.

APPENDIX

Compiled by J. PAPP

List of the publications of the "Zoological Collectings by the Hungarian Natural History Museum in Korea", Nos 101–125. – "Zoologische Aufsammlungen des Ungarischen Naturwissenschaftlichen Museums in Korea", No. 101–125.

List Nos 1–25 see in *Folia ent. hung.* 1976 29(1): 72–74; Nos 26–50 in *Folia ent. hung.* 1981 42(34)(2): 12–13; Nos 51–75 in *Folia ent. hung.* 1987 48: 286–287; and Nos 76–100 in *Folia ent. hung.* 1994 55: 344–346.

- No. 101. ARGAMAN, Q. (1990) A synopsis of Perilampus Latreille with descriptions of new genera and species (Hymenoptera: Perilampidae), I. *Acta Zoologica Academiae Scientiarum Hungaricae* **36**(3–4): 189–263.
- No. 102. SVÍHLA, V. & MERKL, O. (1992) Some Oedemeridae (Coleoptera) from North Korea. Folia Entomologica Hungarica 52(1991): 97–104.
- No. 103. GRUEV, B. (1994) New distributional data about some leafbeetles in the Korean Peninsula and descriptions of four new species (Coleoptera, Chrysomelidae). – *Insecta Koreana* 11: 75–84.
- *No. 104. KIRSCHENHOFER, E. (1990) Neue Platynini aus China und Korea (Coleoptera, Carabidae).

 Zeitschrift der Arbeitsgemeischaft österreichischen Entomologen 42(1–2): 15–21.
- No. 105. PARK, K. T. (1991) Gelechiidae (Lepidoptera) from North Korea with description of two new species. *Annales historico-naturales Musei nationalis hungarici* **83**: 117–123.
- No. 106. RONKAY, L. & VOJNITS, A. (1992) Zoological collectings by the Hungarian Natural History Museum in Korea, 106. A report of the collectings of the thirteenth expedition. *Folia Entomologica Hungarica* **53**: 165–172.
- No. 107. MÉSZÁROS, F. & ZOMBORI, L. (1992) Zoological collectings by the Hungarian Natural History Museum in Korea. 107. A report of the collecting of the fourteenth expedition. Folia Entomologica Hungarica 52 (1991): 73–80.
- * Nos 104, 111, 118 and 121 were given subsequently since they appeared without series numbers and they are integral parts of our Korean series.

- No. 108. BÁLDI, A. & WALITZKY, Z. (1992) Zoological collectings by the Hungarian Natural History Museum in Korea. 108. A report of the collecting of the fifteenth expedition. *Miscellanea Zoologica Hungarica* 7: 117–119.
- No. 109. PUTHZ, V. (1991) Weitere Stenus-Arten aus Korea, nebst synonymischen Bemerkungen (Coleoptera, Staphylinidae). Annales historico-naturales Musei nationalis hungarici 83: 103–110
- No. 110. ZOMBORI, L. (1992) Zoological collectings by the Hungarian Natural History Museum in Korea. 110. A report of the collecting of the sixteenth expedition. *Miscellanea Zoologica Hungarica* 7: 121–123.
- *No. 111. PARK, H. C. & JOSIFOV, M. (1991) Contributions to a knowledge of the Heteroptera of North Korea. *Insecta Koreana* 8: 91–103.
- No. 112. ZANETTI, A. (1993) Contribution to the knowledge of Eastern Palaearctic Eusphalerum Kraatz with description of new species (Coleoptera, Staphylinidae: Omaliinae). Annales historico-naturales Musei nationalis hungarici 85: 47–63.
- No. 113. LEE, B.-H. & PARK, K.-H. (1992) Collembola from North Korea, II. Entomobryidae and Tomoceridae. *Folia Entomolgica Hungarica* **53**: 93–111.
- No. 114. LEE, J.-W. & SUH, K.-I. (1993) A systematic study of Ichneumonidae (Hymenoptera) from North Korea I. Subfamily Mesochorinae. *Annales historico-naturales Musei nationalis hungarici* **85**: 141–153.
- No. 115. RONKAY, L. & VOJNITS, A. (1992) Zoological collectings by the Hungarian Natural History Museum in Korea. 115. A report of the collectings of the seventeenth expedition. *Folia Entomologica Hungarica* 53: 173–177.
- No. 116. PAPP, J. (1994) Braconidae (Hymenoptera) from Korea, XV. Acta Zoologica Academiae Scientiarum Hungaricae 40(2): 133–156.
- No. 117. DANILEWSKY, M. L. (1993) New and little known species of Cerambycidae (Coleoptera) from Korea. *Lambillionea* 93(4): 475–479.
- *No. 118. KIM, J. I. (1992) Specimen list of North Korean Scarabaeoidea conserved in Hungarian Museum of Natural History (1). *Journal of Basic Science* **9**: 101–110.
- No. 119. KIM, J. I. (1993) Specimen list of North Korean Scarabaeoidea conserved in Hungarian Natural History Museum (II). *Journal of Basic Science* 11: 59–70.
- No. 120. DELY-DRASKOVITS, Á. & TAKAHASI, H. (1994) Additional records on the Tabanidae fauna of North Korea (Diptera). *Folia Entomologica Hungarica* **55**: 59–64.
- *No. 121. RONKAY, L. & PARK, K. T. (1993) New faunistic data on the family Noctuidae (Lepidoptera) of the Korean Peninsula. *Insecta Koreana* **10**: 53–74.
- No. 122. PAPP, J. (1994) First outline of the braconid wasps of North Korea (Hymenoptera, Braconidae). Proceedings of the First Korean Hungarian Joint Seminar, Budapest 6–12 February 1994, pp. 94–99.
- No. 123. SZIRÁKI, GY. (1994) A contribution to the knowledge of Neuropteroidea of Korea. Proceedings of the First Korean Hungarian Joint Seminar, Budapest 6–12 February 1994, pp. 61–69.
- No. 124. CSORBA, G. (1994) On the small mammals of North Korea. *Proceedings of the First Korean Hungarian Joint Seminar, Budapest 6–12 February 1994*, pp. 133–142.
- No. 125. BÁLDI, A. BANKOVICS, A. & CSORBA, G. (1994) Data on the distribution of birds on the Korean Peninsula. *Proceedings of the First Korean Hungarian Joint Seminar, Budapest 6–12 February 1994*, pp. 128–131.

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