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Some results of field surveys in Democratic People's Republic of Korea (Coleoptera: Byrrhidae, Dermestidae and Coccinellidae).

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Abstract: 5 species of Byrrhidae, 9 species of Dermestidae and 19 species of Coccinellidae are recorded from Democratic People's Republic of Korea. *Byrrhus* (*s. str.*) *geminatus* LeConte, 1854, *Cytilus sericeus* (Forster, 1771), *Lamprobyrrhulus aino* Nakane, 1983, *Anthrenus* (*Florilinus*) *ussuricus* Zhantiev, 1988, *Megatoma graeseri* (Reitteri, 1887), *Adalia* (*Adaliomorpha*) *conglomerata* (Linnaeus, 1758) and *Adalia* (*Eoadalia*) *koltzei* Weise, 1887 are newly added to the fauna of this country.

Key words: Coleoptera, Byrrhidae, Dermestidae, Coccinellidae, Democratic People's Republic of Korea, Faunistics, new records.

Resumen: Algunos resultados de muestreos en la República Popular Democrática de Corea (Coleoptera: Byrrhidae, Dermestidae y Coccinellidae). Se citan de la República Popular Democrática de Corea 5 especies de Byrrhidae, 9 especies de Dermestidae y 19 especies de Coccinellidae. Son especies nuevas para la fauna de este país *Byrrhus* (*s. str.*) *geminatus* LeConte, 1854, *Cytilus sericeus* (Forster, 1771), *Lamprobyrrhulus aino* Nakane, 1983, *Anthrenus* (*Florilinus*) *ussuricus* Zhantiev, 1988, *Megatoma graeseri* (Reitteri, 1887), *Adalia* (*Adaliomorpha*) *conglomerata* (Linnaeus, 1758) y *Adalia* (*Eoadalia*) *koltzei* Weise, 1887.

Palabras clave: Coleoptera, Byrrhidae, Dermestidae, Coccinellidae, República Popular Democrática de Corea, Faunística, citas nuevas.

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Introduction

This paper records the Byrrhidae, Dermestidae and Coccinellidae collected by the junior author in Democratic People's Republic of Korea from April to July, 2012. The field surveys were conducted in Pyongyang City, Kechon City, Ullin Waterfall, Mt. Myohyang-San, Mt. Pekto-San, etc. Six species are newly added to the fauna of this country. The collection will be deposited in the Korea University, Tokyo.

Results

Family Byrrhidae

Most of them have been collected in mountainous areas. Jäger & Pütz (2006) recorded *Byrrhus pustulatus* (Forster, 1771) in the *Catalogue of Palaearctic Coleoptera*, which was the unique publication on Korean byrrhid fauna.

Tribe Byrrhini Latreille

Byrrhus (s. str.) *geminatus* LeConte, 1854 (Fig. 1)

Material examined: 1 ex., Mt. PekTo-San, alt. ca. 2500–2750 m, RyangGang-Do, 15.VII.2012; 1 ex., SanJiYon-Gun, ChongBong, alt. ca. 1300 m, 16.VII.2012.

Distribution: Holarctic (Jäger & Pütz, 2006).

Remarks: Newly recorded from this country. Integuments of specimens were abraded and denuded.

Byrrhus (s. str.) *pustulatus* (Forster, 1771)

Material examined: 1 ex., Mt. MyoHyang-San, HyangSan-Gun, KunGanRu-PobWangBon, alt. ca. 500–1300 m, 3.VI.2012.

Distribution: Palaearctic (Jäger & Pütz, 2006).

Byrrhus sp. (Fig. 2)

Material examined: 1 ex., Monument of Musan-war, alt. ca. 1100 m, SanJiYon-Gun, RyangGang-Do, 17.VII.2012; 1 ex., SanJiYon-Gun, PekToSan-MiRyong-Gu, alt. ca. 1500 m, RyangGang-Do, 15.VII.2012.

Remarks: The extremely large body (length 11 mm) and the well convex elytra are remarkable. This species is possibly indigenous to Korean Peninsula. The hind wings are present but become very short. We desist from describing it as a new species since there are only two females available.

Cytilus sericeus (Forster, 1771)

Material examined: 1 ex., Mt. RekTo-San, alt. ca. 2500–2750 m, RyangGang-Do, 15.VII.2012.

Distribution: Palaearctic (Jäger & Pütz, 2006).

Remarks: Newly recorded from this country.

Tribe Pedilophorini Casey

Lamprobyrrhulus aino Nakane, 1983 (Fig. 3)

Material examined: 1 ex., around Urlin Waterfall, PobTong-Gun, KangWon-Do, 19.VI.2012.

Distribution: North Korea, Japan (Nakane, 1983).

Remarks: It has been determined on the basis of golden and silver elytral pubescence. Newly recorded from this country.

Family Dermestidae

Tribe Dermestini Latreille

Dermestes (s. str.) *vorax* Motschulsky, 1860

Material examined: 3 exx., around SongAm-DonGul, Kechon City, HyangSan-Gun, 2.VI.2012; 1 ex., PyongYang City, RyangSan-Jigu, ChongRyon-Forest, 28.IV.2012.

Distribution: China, East Russia, North Korea, South Korea, Japan (Mroczkowski, 1966; Kim *et al.*, 1999; Háva, 2007).

***Dermestes (Dermestinus) tessellatocollis* Motschulsky, 1860**

Material examined: 2 exx., around Urlin Waterfall, PobTong-Gun, KangWon-Do, 19.VI.2012.

Distribution: China, East Russia, North Korea, South Korea, Japan (Mroczkowski, 1966; Kim *et al.*, 1999; Háva, 2007).

Remarks: Specimens have been found in the external space of a window rail which was clogged by many dead insects.

Tribe Attagenini Laporte

***Attagenus unicolor japonicus* Reitter, 1887**

Material examined: 2 exx., PyongYang City, around Mt. RyongAk-San, near Suna river, 6-9.VI.2012; 1 ex., ditto, 31.V.2012; 1 ex., around Mt. MyoHyang, International Friendship Exhibition, HyangSan-Gun, 4.VI.2012; 3 exx., Kechon City, around SongAm-DonGul, HyangSan-Gun, 2.VI.2012; 2 exx., Mt. MyoHyang-San, KunganRu-PobWanBon, alt. ca. 500-1350 m, HyangSan-Gun, 3.VI.2012; 2 exx., WonSan City, around SongDoWon, KangWon-Do, 13-18.VI.2012.

Distribution: China, Mongolia, North Korea, South Korea, Laos, Japan, Russia, Romania, Switzerland, U.S.A., Canada (Mroczkowski, 1966; Kim *et al.*, 1999; Háva, 2007; Kitano & Háva, 2012).

Remarks: This species appears to be a common household pest in this country.

Tribe Anthrenini Casey

***Anthrenus (Nathrenus) verbasci* (Linnaeus, 1767)**

Material examined: 4 exx., PyongYang City, around Mt. RyongAk-San, near Suna river, 8.V.2012; 2 exx., ditto, 9-14.V.2012; 2 exx., ditto, 18.V.2012; 1 ex., ditto, 31.V.2012; 1 ex., WonSan City, around SongDoWon, KangWon-Do, 18.VI.2012.

Distribution. Cosmopolitan (Háva, 2007).

***Anthrenus (Florilinus) coreanus* Mroczkowski, 1966**

Material examined: 2 exx., PyongYang City, around Mt. RyongAk-San, near Suna river, 6-9.VI.2012.

Distribution: North Korea (Mroczkowski, 1966).

Remarks: Specimens have been collected indoors. So they are possibly a household pest. This species is endemic and not recorded from other countries yet.

***Anthrenus (Florilinus) ussuricus* Zhantiev, 1988 (Fig. 4)**

Material examined: 2 exx., PobTong-Gun, around Urlin Waterfall, KangWon-Do, 19.VI.2012.

Distribution: Russia, North Korea (Háva, 2007).

Remarks: Newly recorded from this country. Those two specimens are somewhat abraded.

Tribe Megatomini Leach

Megatoma graeseri (Reitter, 1887) (Fig. 5)

Material examined: 8 exx., SanJiYon-Gun, around PeGe-Bong, alt. ca. 1400 m, RyangGang-Do, 17.VII.2012.

Distribution: Russia, Kyrgyzstan, Mongolia, Japan, North Korea (Háva, 2007).

Remarks: Specimens have been collected indoors on the window rail. Newly recorded from this country.

Trogoderma teukton Beal, 1957

Material examined: 1 ex., KeSong City, near Mt. ChaNam-San, HwangHeNam-Do, 26-27.VI.2012.

Distribution: Nearctic, China, Iran, Kazakhstan, Kyrgyzstan, Tajikistan, Japan, North Korea (Háva, 2007; Kitano & Han, 2011).

Orphinus (s. str.) *changdoi* Kadej & Kitano, 2010

Material examined: 1 ex., KeSong City, near Mt. ChaNam-San, HwangHeNam-Do, 26.-7.VI.2012.

Distribution: North Korea (Kadej & Kitano, 2010).

Remarks: It has been collected outdoors on flowers of *Albizia julibrissin*.

Family Coccinellidae

Tribe Scymnini Mulsant

Scymnus (s. str.) *crinitus* Fürsch, 1966

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna-river, 2-14.VII.2012.

Distribution: East Russia, China, North Korea (Jadwiszczak & Park, 1997).

Scymnus (*Neopullus*) sp.

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna-river, 5.V.2012.

Remarks: This female specimen possibly belongs to *Scymnus brunnescens* Motschulsky, 1866 or *S. fuscatus* Boheman, 1859.

Tribe Stethorini Dobzhansky

Stethorus pusillus (Herbst, 1797)

Material examined: 2 exx., PyongYang City, around Mt. RyongAk-San, near Suna-river, 18.V.2012.

Distribution: Holarctic (Kovář, 2007).

Remarks: Bielawski (1980) has recorded this species from this country under the name of *Stethorus punctillum* (Weise, 1891), which is more famous than *S. pusillus* due to taxonomical confusion.

Tribe Noviini Mulsant

***Rodolia limbata* Motschulsky, 1866**

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna-river, 8.V.2012.

Distribution: China, East Russia, North Korea, South Korea, Japan (Kovář, 2007).

Tribe Chilcorini Mulsant

***Chilocorus rubidus* Hope, 1831**

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna-river, 21-23.IV.2012; 4 exx., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012.

Distribution: Oriental (Kovář, 2007).

Remarks: Specimens considerably vary in size (length 5 to 8 mm).

***Chilocorus kuwanae* Silvestri, 1909**

Material examined: 2 exx., PyongYang City, around Mt. RyongAk-San, near Suna-river, 21-23.IV.2012; 1 ex., ditto, 29.IV.2012; 1 ex., WongSan City, around SonDoWon, KangWon-Do, 13-18.VI.2012; 1 ex., KeSong City, near Mt. ChaNam-San, HwangHeNam-Do, 26-27.VI.2012.

Distribution: Oriental, France, Italy (Kovář, 2007).

Remarks: Some specimens have completely lost the elytral spots.

Tribe Coccinellini Latreille

***Propylea japonica* (Thunberg, 1781)**

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna river, 29.IV.2012; 1 ex., ditto, 3.V.2012; 2 exx., ditto, 9-14. V.2012; 1 ex., ditto, 6.V.2012; 2 exx., ditto, 9-14.V.2012; 1 ex., ditto, 31.V.2012.

Distribution: Oriental (Kovář, 2007).

***Calvia quatuordecimguttata* (Linnaeus, 1758)**

Material examined: 1 ex., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012.

Distribution: Holarctic, Oriental (Kovář, 2007).

***Adalia (Adaliomorpha) conglomerata* (Linnaeus, 1758) (Fig. 6)**

Material examined: 1 ex., WongSan City, around SonDoWon, KangWon-Do, 18.VI.2012.

Distribution: Palaearctic (Kovář, 2007).

Remarks: Newly recorded from this country.

***Adalia (Eoadalia) koltzei* Weise, 1887 (Fig. 7)**

Material examined: 1 ex., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012.

Distribution: Far East Russia, North Korea (Kovář, 2007).

Remarks: Newly recorded from this country.

***Coccinella (s. str.) septempunctata* Linnaeus, 1767**

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna river, 4.V.2012.

Distribution: Holarctic (Kovář, 2007).

***Coccinella (s. str.) hieroglyphica mannerheimi* Mulsant, 1850**

Material examined: 1 ex., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012.

Distribution: China, East Russia, North Korea, South Korea (Kovář, 2007).

***Harmonia axydris* (Pallas, 1773)**

Material examined: 2 exx., PyongYang City, around Mt. RyongAk-San, near Suna river, 21-23.IV.2012; 7 exx., ditto, 29.IV.2012; 1 ex., ditto, 4.V.2012; 1 ex., ditto, 8.V.2012; 6 exx., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012; 1 ex., near Mt. Kungang-San, KangWon-Do, 14.VI.2012; 1 ex., WongSan City, around SonDoWon, KangWon-Do, 13-18.VI.2012.

Distribution: Holarctic (Kovář, 2007).

***Aiolocaria hexiaspilota* (Hope, 1831)**

Material examined: 1 ex., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012.

Distribution: Oriental (Kovář, 2007).

***Anatis halonis* (Lewis, 1896)**

Material examined: 1 ex., HyanSan-Gun, near Mt. MyoHyang-San, BoHyonSa, 4.VI.2012; 1 ex., Mt. PekTo-San, alt. ca. 2500-2750 m, RyangGang-Do, 15.VII.2012.

Distribution: North Korea, South Korea, Japan (Kovář, 2007).

Remarks: The two specimens have a striking elytral marking: one of them completely lacks black spots and furnished whitish spots; black spots of the other one are longitudinally confluent and forming stripes.

***Anisosticta* sp.**

Material examined: 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna river, 10-11.VI.2012.

Remarks: No male specimen is available. This female specimen is similar to *A. kobensis* Lewis, 1896 in most characters.

***Oenopia scalaria* (Timberlake, 1943)**

Material examined: 1 ex., HyangSan-Gun, Mt. MyoHyang-San, KunGangRu-PobWangBon, alt. ca. 500-1350 m, 3.VI.2012.

Distribution: Oriental (Kovář, 2007).

Tribe Epilachnini Mulsant

Epilachna quadricollis (Dieke, 1947)

Material examined: 1 ex., WongSan City, around SonDoWon, KangWon-Do, 13-18.VI.2012.

Distribution: China, North Korea (Kovář, 2007).

Henosepilachna vigintioctomaculata (Motschulsky, 1858)

Material examined: 2 exx., PyongYang City, Jung-Kuyok, MunGyong-Ri, Mt. DaeBak-San, 28.IV.2012; 1 ex., PyongYang City, around Mt. RyongAk-San, near Suna river, 18.V.2012.

Distribution: Oriental (Kovář, 2007).

References

- Bielawski, R. 1980. Die Marienkäfer (Coleoptera: Coccinellidae) der Koreanischen Volksdemokratischen Republik. *Fragmenta Faunistica* **25**(13): 221-254.
- Háva, J. 2007. Dermestidae, pp. 299-320. In: Löbl, I. & A. Smetana (eds.). *Catalogue of Palaearctic Coleoptera, 4, Elateroidea-Derodontoidea-Bostrichoidea-Lymexyloidea-Cleroidea-Cucujoidea*. Apollo Books, Stenstrup.
- Jadwiszczak, A. & Park, H.-C. 1997. The Coccinellidae (Coleoptera) of the Korean Peninsula. *Fragmenta Faunistica*, **40**: 111-125.
- Jäger, O. & Pütz, A. 2006. Byrrhidae, pp. 421-432. In: Löbl, I. & A. Smetana (eds.). *Catalogue of Palaearctic Coleoptera, 3, Scarabaeoidea-Scirtoidea-Dascilloidea-Buprestoidea-Byrrhoidea*. Apollo Books, Stenstrup.
- Kadej, M. & Kitano, T. 2010. A taxonomic study on the genus *Orphinus* Motschulsky, 1858 of the Korean Peninsula (Coleoptera: Dermestidae: Megatominae). *Annales Zoologici*, **60**(2): 215-219.
- Kim, A.; Park, H.; Lee, Y.; Jang, S. & Han, M. 1999. Taxonomic review of Dermestidae (Insecta: Coleoptera) associated with stored silkworm cocoons in Korea. *Korean Journal of Entomology*, **29**: 195-202.
- Kitano, T. & Han, C. 2011. Records of Dermestidae (Coleoptera) from DPR Korea. *Japanese Journal of Systematic Entomology*, **17**(1): 127-128.
- Kitano, T. & Háva, J. 2012. Collecting records of Dermestidae (Coleoptera) from Laos with description of a new species. *Studies and Reports, Taxonomical series*, **8**(1-2): 213-218.
- Kovář, I. 2007. Coccinellidae, pp. 568-631. In: Löbl, I. & A. Smetana (eds.). *Catalogue of Palaearctic Coleoptera, 4, Elateroidea-Derodontoidea-Bostrichoidea-Lymexyloidea-Cleroidea-Cucujoidea*. Apollo Books, Stenstrup.
- Mroczkowski, M. 1966. Contribution to the knowledge of Silphidae and Dermestidae of Korea (Coleoptera). *Annales Zoologici*, **23**: 433-443.
- Nakane, T. 1983. New or little-known Coleoptera from Japan and its adjacent regions XXXVI. *Fragmenta Coleopterologica*, **35-37**: 139-150.



Figs. 1-7.- Habitus: 1.- *Byrrhus geminatus*. 2.- *Byrrhus* sp. 3.- *Lamprobyrrhulus aino*. 4.- *Anthrenus ussuricus*. 5.- *Megatoma graeseri*. 6.- *Adalia* (*Adaliomorpha*) *conglomerata*. 7.- *Adalia* (*Eoadalia*) *koltzei*.