

The Family Andrenidae of Korea (Hymenoptera, Apoidea) I.

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The Family Andrenidae of Korea (Hymenoptera, Apoidea) I. ^{1), 2)}

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Abstract

A total of 25 species based on 629 specimens is recorded from main land of southern Korea and the Cheju Island. One new species, *Andrena (Micrandrena) chirisana* is described, and fourteen species are newly recorded from Korea.

INTRODUCTION

In this paper, we report 24 species of *Andrena* and 1 species of *Panurginus* based on 629 specimens (261 females and 368 males) from southern Korea including Cheju Island. The material was collected by the South Korea survey in 1990 (the Cheju Island) and 1991 (main land of southern Korea) under the Korea-Japan Co-operative Science Program. Among them 1 species was collected from the Cheju Island and 24 species were from main land of southern Korea. We describe one new species, *Andrena (Micrandrena) chiriana*, and newly record fourteen species from Korea.

Before going further we express our sincere thanks to Prof. K. Morimoto and Prof. T. Saigusa of Kyushu University for their collecting many specimens. We are also thankful to Director Curator Mr. Yoon-Kee Kim, Mr. Seong-Jin Kang and Mr. Sei-Ho Jung of Cheju-do Folklore and Natural History Museum for their help for our collecting in the Cheju Island.

Family Andrenidae

1) Results from the Korea-Japan Co-operative Science Program on "The Evolution and Biogeography of the Insects in the East Asia". No. 5.

2) Contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka (Ser. 4, No. 39).

Subfamily **Andreninae**Subgenus ***Andrena*, s. str.**1. ***Andrena (Andrena) brevihirtiscopa* Hirashima**

Andrena (Andrena) brevihirtiscopa Hirashima, 1962, J. Fac. Agr., Kyushu Univ., 12: 124; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 100,116; Tadauchi, Hirashima and Matsumura, 1987, J. Fac. Agr., Kyushu Univ., 31: 12, 16, 18; Tadauchi, 1989, A Check List of Jap. Insects, 683.

Specimens examined : 2 females and 1 male, Dal Gung, San Nae Meon, Nam Weon Gun, Cheon-La Buk Do, 10. v. 1991 (O. Tadauchi); 2 females and 3 males, Mt. Nogodan, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 10. v. 1991 (T. Saigusa); 1 female, Mt. Nogodan, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 12. v. 1991 (T. Saigusa); 1 female, Sim Won Valley, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 1 female and 1 male, Sim Won Valley, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 13. v. 1991 (T. Saigusa); 3 females and 2 males, Jeong Lyong Chy, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 14. v. 1991 (T. Saigusa).

Distribution : southern Korea(new record), Japan (Hokkaido, Honshu, Sado Is., Kyushu).

2. ***Andrena (Andrena) mikado* Strand et Yasumatsu**

Andrena (Melandrena) mikado Strand et Yasumatsu, 1938, Mushi, 11: 67.

Andrena mikado : Yasumatsu, 1941, Peking Nat. Hist. Bull., 15: 278; Kim, 1970, Ill. Fauna & Flora Korea, 11(3): 660,824.

Andrena (Andrena) mikado : Hirashima, 1962, J. Fac. Agr., Kyushu Univ., 12: 127; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 101,116; Tadauchi, Hirashima and Matsumura, 1987, J. Fac. Agr., Kyushu Univ., 31: 12, 16, 20; Tadauchi, 1988, Bull. Nagasaki Biol. Soc., (33): 2; Tadauchi, 1989, A Check List of Jap. Insects, 683.

Specimens examined : 1 female and 1 male, Dal Gung, San Nae Meon, Nam Weon Gun, Cheon-La Buk Do, 10. v. 1991 (O. Tadauchi); 1 male, Sam Jeong Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam Do, 11. v. 1991 (O. Tadauchi); 3 females, Sim Won Valley, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 6 females and 1 male, Sam Jeong Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam Do, 15. v. 1991 (O. Tadauchi); 2 males, Sam Jeong Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam Do, 15. v. 1991 (T. Saigusa).

Distribution: Korea, Japan (Honshu, Shikoku, Kyushu, Tsushima Is., Yakushima Is.).

3. ***Andrena (Andrena) ishiharai* Hirashima**

Andrena (Andrena) ishiharai Hirashima, 1953, Trans. Shikoku Ent. Soc., 3: 33; Hirashima, 1962, J. Fac. Agr., Kyushu Univ., 12: 132; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 101,116; Tadauchi, Hirashima and Matsumura, 1987, J. Fac. Agr., Kyushu Univ., 31: 12, 14, 23; Tadauchi, 1989, A Check List of Jap. Insects, 683.

Specimens examined : 1 male, Sam Jeong Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam

Do, 15. v. 1991 (O.Tadauchi).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Shikoku).

4. *Andrena (Andrena) sakagami* Tadauchi, Hirashima et Matsumura

Andrena (Andrena) sakagami Tadauchi, Hirashima and Matsumura, 1987, J. **Fac. Agr.**, Kyushu Univ., 31: 13, 15, 29; Tadauchi, 1989, A **List** of Jap. Insects, 683.

Specimens examined : 2 males, Sam Jeong Li, Ma Cheong **Meon, Hamyang** Gun, Kyeon Sang **Nam Do**, 9. v. 1991 (T. Saigusa); 1 male, same locality as above, 11. v. 1991 (T. Saigusa); 1 female, Sim Won Valley, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 3 females, Jeong Lyong Chy, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (O. Tadauchi); 1 female and 1 male, Sam Jeong Li, Ma Cheong **Meon, Hamyang** Gun, Kyeon Sang Nam Do, 15. v. 1991 (T. Tadauchi); 2 males, same locality and date as above (T. Saigusa).

Distribution : southern Korea (new record), Japan (Hokkaido, Okushiri Is., northern Honshu) (Fig. 1).

5. *Andrena (Andrena) longitibialis* Hirashima

Andrena (Andrena) longitibialis Hiiashima, 1962, J. **Fac. Agr.**, Kyushu Univ., 12: 139; Hirashima, 1966, J. **Fac. Agr.**, Kyushu Univ., 14: 102, 116; Tadauchi, Hirashima and Matsumura, 1987, J. **Fac. Agr.**, Kyushu Univ., 31: 13, 16, 38; Tadauchi, 1989, A Check List of Jap. Insects, 683.

Specimens examined : 1 female, Sim Won **Valley**, San Nae **Meon, Nam Weon** Gun, Cheon-La **Nam Do**, 13. v. 1991 (O. Tadauchi).

Distribution : southern Korea (new record), Japan (Hokkaido, Rishiri Is., Honshu, Sado Is., **Izu-Oshima Is., Oki Is.**, Shikoku, Kyushu).

Subgenus *Euandrena*

6. *Andrena (Euandrena) stellaria* Hirashima

Andrena (Euandrena) stellaria Hiiashima, 1964, J. **Fac. Agr.**, Kyushu Univ., 13: 49; Hirashima, 1966, J. **Fac. Agr.**, Kyushu Univ., 14: 110, 119; Tadauchi and Hirashima, 1984, **Esakia**, (22): 108, 113; Tadauchi, 1988, **Bull. Nagasaki Biol. Soc.**, (33): 2; Tadauchi, 1989, A Check List of Jap. Insects, 683.

Specimens **examined** : 1 female, Jeong Lyong Chy, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (O. Tadauchi).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Sado Is., Shikoku, **Kyushu, Tsushima Is., Tanegashima Is.**).

7. *Andrena (Euandrena) ruficrus rabcicus* Hirashima

Andrena (Euandrena) ruficrus rabcicus Hirashima, 1957, **Mushi**, 30: 50; Hirashima, 1964, J. **Fac. Agr.**,

Kyushu Univ., 13: 51; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 108; Hirashima, Tadauchi and Suda, 1979, Esakia, (14):139; Tadauchi and Hirashima, 1984, Esakia, (22): 108,112; Tadauchi, 1989, A Check List of Jap. Insects, 683.

Specimens **examined** : 2 females, Jeong Lyong Chy, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 14. v. 1991 (O. Tadauchi).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu).

Subgenus *Hoplandrena*

8. *Andrena (Hoplandrena) dentata* Smith

Andrena dentata Smith, 1879, Descr. New Spec. Hym., 51; Dalla Torre, 1896, Cat. Hym., 10: 117; Cockerell, 1913, Ann. Mag. Nat. Hist., (8) 11: 189; Yasumatsu, 1941, Peking Nat. Hist. Bull., 15: 275; Kim, 1970, Ill. Fauna & Flora Korea, 11(3): 659,824.

Andrena biscutata Perez, 1905, Bull. Mus. d'Hist. Nat. Paris, 1905: 33; Cockerell, 1913, Ann. Mag. Nat. Hist., (8) 11: 190.

Andrena (Hoplandrena) dentata : Hirashima, 1964, J. Fac. Agr., Kyushu Univ., 13: 84; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 100,115; Tadauchi and Hirashima, 1984, Kontyû, 52: 284; Tadauchi, 1988, Bull. Nagasaki Biol. Soc., (33): 3; Tadauchi, 1989, A Check List of Jap. Insects, 684.

Specimens examined : 1 male, Sam Jeong Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam Do, 10. v. 1991 (O. Tadauchi); 1 male, Mt. Nogodan, San Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 10. v. 1991 (T. Saigusa); 1 male, Sam Jeon Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam Do, 11. v. 1991 (T. Saigusa); 1 male, Sam Jeon Li, Ma Cheong Meon, Hamyang Gun, Kyon Sang Nam Do, 15. v. 1991 (O. Tadauchi).

Distribution : Korea, Japan (Hokkaido, Honshu, Sado Is., Shikoku, Kyushu, Tsushima Is.).

Subgenus *Gymnandrena*

9. *Andrena (Gymnandrena) parathoracica* Hirashima

Andrena (Gymnandrena) parathoracica Hirashima, 1957, Mushi, 30: 63; Hirashima, 1964, J. Fac. Agr., Kyushu Univ., 13: 59; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 106,119; Kim, 1970, Ill. Fauna & Flora Korea, 11(3): 660, 824; Tadauchi, 1988, Bull. Nagasaki Biol. Soc., (33): 3; Tadauchi, A Check List of Jap. Insects, 683.

Specimens **examined** : 1 female, Kan-Ki Li, Ii Paek Meon, Nam Weon Gun, Cheon-La Buk Do, 16. v. 1991 (T. Saigusa); 1 female, same locality and date as above (O. Tadauchi).

Distribution : Korea, Japan (Hokkaido, Honshu, Shikoku, Kyushu, Tsushima Is.).

Subgenus *Simandrena*

10. *Andrena (Simandrena) yamato* Tadauchi et Hirashima

Andrena (Simandrena) opacifovea Hirashima, 1952, **Mushi**, 24: 31, in part; Hiiashima, 1965, J.Fac.

Agr., Kyushu Univ., 13: 497, in part.

Andrena (Simandrena) yamato, Tadauchi et Hirashima, 1983, Esakia, (20): 83; Tadauchi, 1988, **Bull.**

Nagasaki Biol. Soc., (33): 4; Tadauchi, 1989, A Check List of Jap. Insects, 685.

Specimens examined : 4 males, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 9. v. 1991 (O. Tadauchi); 2 males, same locality as above, 9. v. 1991 (T. Saigusa); 1 male, **Dal Gung**, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Buk Do, 10. v. 1991 (O. Tadauchi); 1 male, Mt. Nogodan, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 10. v. 1991 (T. Saigusa); 6 males, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 11. v. 1991 (O. Tadauchi); 3 males, same locality and date as above (K. Morimoto); 2 males, same locality and date as above (T. Saigusa); 1 male, Mt. Nogodan, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 12. v. 1991 (T. Saigusa); 43 males, Sim Won Valley, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 1 male, same locality and date as above (K. Morimoto); 1 male, same locality and date as above (T. Saigusa); 2 males, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 15. v. 1991 (O. Tadauchi); 7 males, same locality and date as above (T. Saigusa).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Sado Is., Shikoku, Kyushu, Tsushima Is., Tanegashima Is.).

11. *Andrena (Simandrena) opacifovea opacifovea* Hirashima

Andrena (Simandrena) opacifovea Hirashima, 1952, **Mushi**, 24: 31; Hirashima, 1965, J. Fac. Agr., Kyushu Univ., 13: 497.

Andrena (Simandrena) opacifovea opacifovea : Tadauchi and Hiiashima, 1983, Esakia, (20): 82; Tadauchi, 1988, **Bull.** Nagasaki Biol. Soc., (33): 5; Tadauchi, 1989, A Check List of Jap. Insects, 685.

Specimens examined : 1 female, Sim Won Valley, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (T. Saigusa).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Sado Is., Shikoku, Kyushu, Tsushima Is., Tanegashima Is.).

12. *Andrena (Simandrena) koma* Hirashima

Andrena (Simandrena) koma Hirashima, 1952, **Mushi**, 24: 32.

Specimens examined : 1 female, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 15. v. 1991 (K. Morimoto); 1 female, same locality and date as above, Malaise trap.

Distribution : southern and **central** Korea.

This species was described based on one female specimen **collected** from **Suigen**, central Korea.

13. *Andrena (Simandrena) kerriae* Hirashima

Andrena (Simandrena) kerriae Hirashima, 1965, J. Fac. Agr., Kyushu Univ., 13: 499; Hirashima, 1966,

J. Fac. Agr., Kyushu Univ., 14: 106; Tadauchi and Hirashima, 1983, Esakia, (20): 87; Tadauchi, 1988, **Bull.** Nagasaki Biol. Soc., (33): 5; Tadauchi, 1989, A Check List of Jap. Insects, 685.

Specimens examined : 4 females, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 9. v. 1991 (O. Tadauchi); 9 females and 1 male, Jeong Lyong Chy, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (O. Tadauchi); 1 male, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 15. v. 1991 (O. Tadauchi).

Distribution : southern Korea (new record), Japan(Hokkaido, Honshu, Sado Is., Shikoku, Kyushu, Tsushima Is.).

Subgenus *Micrandrena*

14. *Andrena (Micrandrena) hikosana* Hirashima

Andrena (Micrandrena) hikosana Hiiashima, 1957, **Mushi**, 30: 53, Hiiashima, 1965, **J. Fac. Agr.**, Kyushu Univ., 13: 462; Hiiashima, 1966, **J. Fac. Agr.** Kyushu Univ., 14: 94,117; Kim and Kim, 1983, **Kor. J. Ent.**, 13: 7; Tadauchi, 1985, **J. Fac. Agr.**, Kyushu Univ., 30: 60, 88, 90; Tadauchi, 1988, **Bull. Nagasaki Biol. Soc.**, (33): 5; Tadauchi, 1989, **A Check List of Jap. Insects**, 684.

Specimens examined : 1 female, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 9. v. 1991 (O. Tadauchi); 1 female, Dal **Gung**, San Nae **Meon, Nam Weon** Gun, Cheon-La Buk Do, 10. v. 1991 (O. Tadauchi); 1 female and 8 males, Mt. Nogodan, San Nae **Meon, Nam Weon** Gun, **Cheon-La** Nam Do, 10. v. 1991 (T. Saigusa); 2 males, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 11. v. 1991 (O. Tadauchi); 1 female and 1 male, same locality and date as above (K. Morimoto); 16 males, same locality and date as above (T. Saigusa); 1 female and 1 male, Sim Won Valley, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 7 males, same locality and date as above (T. Saigusa); 1 male, same locality and date as above (K. Morimoto); 27 males, Mt. Nogodan, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 6 males, Jeong Lyong Chy, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (T. Saigusa); 32 males, Sam Jeon Li, Ma Cheong **Meon, Hamyang** Gun, Kyon Sang Nam Do, 15. v. 1991 (O. Tadauchi); 1 female, same locality and date as above (K. Morimoto); 5 males, same locality and date as above (T. Saigusa).

Distribution : southern and central Korea, Japan (Hokkaido, Honshu, Sado Is., Shikoku, Kyushu, Tsushima Is.).

15. *Andrena (Micrandrena) sublevigata* Hirashima

Andrena (Micrandrena) sublevigata Hirashima, 1966, **J. Fac. Agr.**, Kyushu Univ., 14: 91, 95, 117; Tadauchi, 1985, **J. Fac. Agr.**, Kyushu Univ., 30: 65, 89; Tadauchi, 1989, **A Check List of Jap. Insects**, 684.

Specimens examined : 1 female, San Lyong Li, San Nae **Meon, Nam Weon** Gun, Cheon-La Buk Do, 12. v. 1991 (O. Tadauchi); 1 female and 1 male, Sim Won Valley, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 1 male, Jeong Lyong Chy, San Nae **Meon, Nam Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (T. Saigusa).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Sado Is., Shikoku, Kyushu).

16. *Andrena (Micrandrena) brassicae* Hirashima

Andrena (Micrandrena) brassicae Hirashima, 1957, *Mushi*, **30**: 52; Hiiashima, 1965, *J. Fac. Agr.*, Kyushu Univ., **13**: 464; Hirashima, 1966, *J. Fac. Agr.*, Kyushu Univ., **14**: 95,117; Kim and Kim, 1983, *Kor. J. Ent.*, **13**: 7; Tadauchi, 1985, *J. Fac. Agr.*, Kyushu Univ., **30**: 67, 89; Tadauchi, 1988, *Bull. Nagasaki Biol. Soc.*, (33): 6; Tadauchi, 1989, A Check List of Jap. Insects, 684.

Specimens examined : 1 female, Dal Gung, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Buk Do, 10. v. 1991 (O. Tadauchi); 1 female, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang Nam Do, 11. v. 1991 (O. Tadauchi); 3 females, San Lyong Li, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Buk Do, 12. v. 1991 (O. Tadauchi); 1 male, Sim Won Valley, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (T. Saigusa).

Distribution : southern and central Korea, Japan (Hokkaido, Honshu, Sado Is., Shikoku, Kyushu, Tsushima Is., Tanegashima Is., Yakushima Is.).

17. *Andrena (Micrandrena) munakatai* Tadauchi

Andrena (Micrandrena) munakatai Tadauchi, 1985, *J. Fac. Agr.*, Kyushu Univ., **30**: 70, 89; Tadauchi, 1989, A Check List of Jap. Insects, 684.

Specimens examined : 1 female, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang Nam Do, 9. v. 1991 (O. Tadauchi); 1 male, same locality as above, 11. v. 1991 (O. Tadauchi); 1 male, Mt. Nogodan, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 89 females and 13 males, Jeong Lyong Chy, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (O. Tadauchi).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu). (Fig. 2)

18. *Andrena (Micrandrena) chirisana* Tadauchi, n. sp.

This species is similar to *Andrena komachi* Hiiashima and *Andrena mzmakatai* Tadauchi, and also similar to the European *Andrena alfenelloides* Warncke. But it is separable from *A. komachi* and *A. munakatai* by the process of **labrum** smaller and not rectangular, the mesoscutum with sparser and smaller punctures, the metasomal tergum 1 very weakly tessellate, impunctate anteriorly, shiny and smooth posteriorly, **and** the posterior depressions of the metasomal terga 2-4 wide, **almost** smooth **and** shiny. It is also separated from *A. alfenelloides* by the head without blackish hairs, and the propodeal enclosure more wrinkled.

Female. Length 6.5-7.0 mm.

Integumental color : Flagellar segments beneath 3-10 blackish brown; posterior margins of **metasomal** terga narrowly brownish subhyaline.

Pubescence : Hairs on head and thorax short, on head whitish, on vertex and thorax dull whitish, without brown ones; facial fovea brownish above, paler below; metasomal tergum 1 with very sparse, short, whitish hairs, only **laterally**; posterior margins of metasomal terga 2-3 with lateral **fringes** of dense, appressed, white hairs; metasomal sterna with dense, white fringes; **caudal** fimbria pale brownish.

Structure : Process of **labrum** small, slightly round **apically**, not rectangular; clypeus strongly **con-**

vex, weekly tessellate, scattered with weak punctures; facial fovea with upper end occupying slightly less than one half of **postocellar** distance, with lower end reaching basal margin of clypeus; facial fovea not separated from eye margin by a wide shiny space; **genal** area narrower than eye seen in profile; **mesoscutum** very weakly tessellate and shiny with small, sparse punctures; **scutellum** nearly smooth, shiny; **propodeal** enclosure large, well indicated, strongly **wrinkled** all over; mesepisternum shagreened anteriorly, densely tessellate posteriorly; metasomal tergum 1 very weakly tessellate, impunctate anteriorly, smooth and shiny posteriorly; terga 2 and following terga very **weakly** tessellate; posterior depressions of terga 2-4 wide, smooth and shiny.

Type material : Holotype female, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang Nam Do, 11. v. 1991 (O. Tadauchi). Paratype: 1 female, same locality as holotype, 9. v. 1991 (O. Tadauchi).

Distribution : southern Korea.

Type depository : The holotype is preserved in the collection of the Kyungpook National University, Korea. The paratype is preserved in the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

The specific name is associated with the type locality, Mt. Chirisan, Korea.

Subgenus *Leucandrena*

19. *Andrena (Leucandrena) richardsi* Hirashima

Andrena richardsi Hirashima, 1965, J. Fac. Agr., Kyushu Univ., 13: 482; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 110,119; Kim, 1970, III. Fauna & Flora Korea, 11(3): 825.

Andrena (Leucandrena) richardsi : Tadauchi, 1989, A Check List of Jap. Insects, 684.

Specimens **examined** : 1 male, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang Nam Do, 15. v. 1991 (T. Saigusa).

Distribution : Korea, Japan (Honshu, Shikoku, Kyushu).

Subgenus *Taeniandrena*

20. *Andrena (Taeniandrena) ezoensis* Hirashima

Andrena (Taeniandrena) ezoensis Hirashima, 1965, J. Fac. Agr., Kyushu Univ., 13: 506; Hirashima, 1966, J. Fac. Agr., Kyushu Univ., 14: 108,119; Tadauchi, 1989, A Check List of Jap. Insects, 685.

Andrena ezoensis; Haneda, 1987, Hym. Comm., (27): 144.

Specimens **examined** : 3 females and 2 males, Yonsil, Mt. Hallasan, Cheju Is., 24. vii. 1990 (O. Tadauchi); 3 females, same locality as above, 25. vii. 1990 (O. Tadauchi).

Distribution : central Korea, Cheju Is. (new record), Japan (Hokkaido, **Honshu**).(Fig. 4)

Subgenus *Chlorandrena*

21. *Andrena (Chlorandrena) okinawana* Matsumura et Uchida

Andrena okinawana Matsumura et Uchida, 1926, *Ins. Mats.*, 1: 69; Yasumatsu, 1941, *Peking Nat. Hist.*, Bug., 15: 279.

Andrena knuthi okinawana: Hirashima, 1958, *Mushi*, 32: 72; Hirashima, 1960, *Mushi*, 33: 54; Ysumatsu and Hirashima, 1965, 33: 252.

Andrena (Chrysandrena) knuthi okinawana: Hirashima, 1963, *J. Fac. Agr.*, Kyushu Univ., 12: 262.

Andrena (Chlorandrena) okinawana: Tadauchi, 1988, *Bull. Nagasaki Biol. Soc.*, (33): 8; Tadauchi, 1989, *A List of Jap. Insects*, 683.

Specimens **examined**: 1 male, San Lyong Li, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Buk Do, 12. v. 1991 (O. Tadauchi); 2 females, Kan-Ki Li, Ii Paek **Meon**, Nam **Weon** Gun, Cheon-La Buk Do, 16. v. 1991 (O. Tadauchi).

Distribution: southern Korea (new record), Japan (Tsushima Is., Amami Is., Okinawa Isls.), **China**. (Fig. 5)

Subgenus *Stenomelissa*

22. *Andrena (Stenomelissa) halictoides* Smith

Andrena halictoides Smith, 1869, *Entomologist*, 4: 205; **Dalla** Torre, 1896, *Cat. Hym.*, 10: 129; **Cockerell**, 1913, *AM. Mag. Nat. Hist.*, (8) 11: 1954; Yasumatsu, 1941, *Pecking Nat. Hist. Bull.*, 15: 276; **Warnecke**, 1967, *Eos*, 43: 276.

Andrena (Stenomelissa) halictoides Hiashima: 1965, *J. Fac. Agr.*, Kyushu Univ., 13: 502(in part); **Hirashima**, 1966, *J. Fac. Agr.*, Kyushu Univ., 14: 97, 112(in part); Tadauchi and Hirashima, 1986, *Trans. Essa Ent. Soc.*, (63): 27; Tadauchi and Hirashima, 1988, *J. Fac. Agr.*, Kyushu Univ., 33: 70.

Halictus halictoides Sandhouse: 1943, *Proc. U. S. Nat. Mus.*, 92: 576.

Specimens **examined**: 1 male, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang Nam Do, 9. v. 1991 (O. Tadauchi); 3 females and 3 males, same locality and date as above (T. Saigusa); 4 males, Kyong Yeo **Meon** (ah. 1300m), Gurye Gun, Cheon-La Nam Do, 10. v. 1991 (O. Tadauchi); 1 female and 2 males, San Lyong Li, San Nae **Meon**, **Nam Weon** Gun, Cheon-La Buk Do, 10. v. 1991 (O. Tadauchi); 4 females and 2 males, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang **Nam** Do, 10. v. 1991 (O. Tadauchi); 11 females and 11 males, same locality as above, 11. v. 1991 (O. Tadauchi); 1 female and 13 males, same locality and date as above, (K. Morimoto); 7 males, same locality and date as above, (T. Saigusa); 1 female, San Lyong Li, San Nae **Meon**, **Nam Weon** Gun, Cheon-La **Buk** Do, 12. v. 1991 (O. Tadauchi); 2 females, Sam Jeon Li, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang **Nam** Do, 12. v. 1991 (T. Saigusa); 8 females and 6 males, Sim Won Valley, San Nae **Meon**, **Nam Weon** Gun, **Cheon-La** Nam Do, 13. v. 1991 (O. Tadauchi); 1 female, same locality and date as above, (K. Morimoto); 1 male, Mt. Nogodan, San Nae **Meon**, **Nam Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (T. Saigusa); 3 females, Jeong Lyong Chy, San Nae **Meon**, **Nam Weon** Gun, Cheon-La Nam Do, 14. v. 1991 (T. Saigusa); 3 males, same locality and date as above (T. saigusa); 57 females and 56 males, Sam Jeon **Li**, Ma Cheong **Meon**, **Hamyang** Gun, Kyon Sang Nam Do, 15. v. 1991 (O. Tadauchi); 1 female and 1 male, same locality and date as above (K. Morimoto); 4 females and 14 males, same locality and date as above

(T. Saigusa).

Distribution : southern and central Korea, Japan(Hokkaido, Honshu, Sado Is.).

Subgenus *Plastandrena*

23. *Andrena (Plastandrena) astragalina* Hirashima

Andrena (Plastandrena) astragalina Hirashima, 1957, *Mushi*, 30: 51; Hirashima, 1965, *J. Fac. Agr.*, Kyushu Univ., 13: 488; Hiiashima, 1966, *J. Fac. Agr.*, Kyushu Univ., 14: 96, 104, 116; Tadauchi, 1989, *A Check List of Jap. Insects*, 685.

Specimens **examined** : 2 males, Sam Jeon Li, Ma Cheong **Meon**, Hamyang Gun, Kyon Sang Nam Do, 9. v. 1991 (K. Morimoto); 1 male, same locality as above, 12. v. 1991 (T. Saigusa); 1 male, same locality as above, 15. v. 1991 (T. Saigusa).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Kyushu).

Subgenus *Trachandrena*

24. *Andrena (Trachandrena) haemorrhhoa japonibia* Hirashima

Andrena (Trachandrena) haemorrhhoa japonibia Hirashima, 1957, *Mushi*, 30: 53; Hirashima, 1965, *J. Fac. Agr.*, Kyushu Univ., 13: 513; Hirashima, 1966, *J. Fac. Agr.*, Kyushu Univ., 14: 96, 117; Tadauchi, 1988, *Bull. Nagasaki Biol. Soc.*, (33): 8; Tadauchi, 1989, *A Check List of Jap. Insects*, 685.

Specimens **examined** : 1 male, Mt. Nogodan, San Nae **Meon**, Nam **Weon** Gun, Cheon-La **Nam Do**, 12. v. 1991 (T. Saigusa); 2 females, Sim Won Valley, San Nae **Meon**, Nam **Weon** Gun, Cheon-La **Nam Do**, 13. v. 1991 (O. Tadauchi).

Distribution : southern Korea (new record), Japan (Hokkaido, Honshu, Shikoku, Kyushu, **Tsushima** Is.).

Subfamily *Panurginae*

25. *Panurginus crawfordi* Cockerell

Panurginus crawfordi Cockerell, 1914, *Ann. Mag. Nat. Hist.*, (8) 13: 279; Hirashima, 1966, *J. Fac. Agr.*, Kyushu Univ., 14: 123; Kim, 1970, *Ill. Fauna & Flora Korea*, 11(3): 825; Tadauchi, 1989, *A Check List of Jap. Insects*, 68.5.

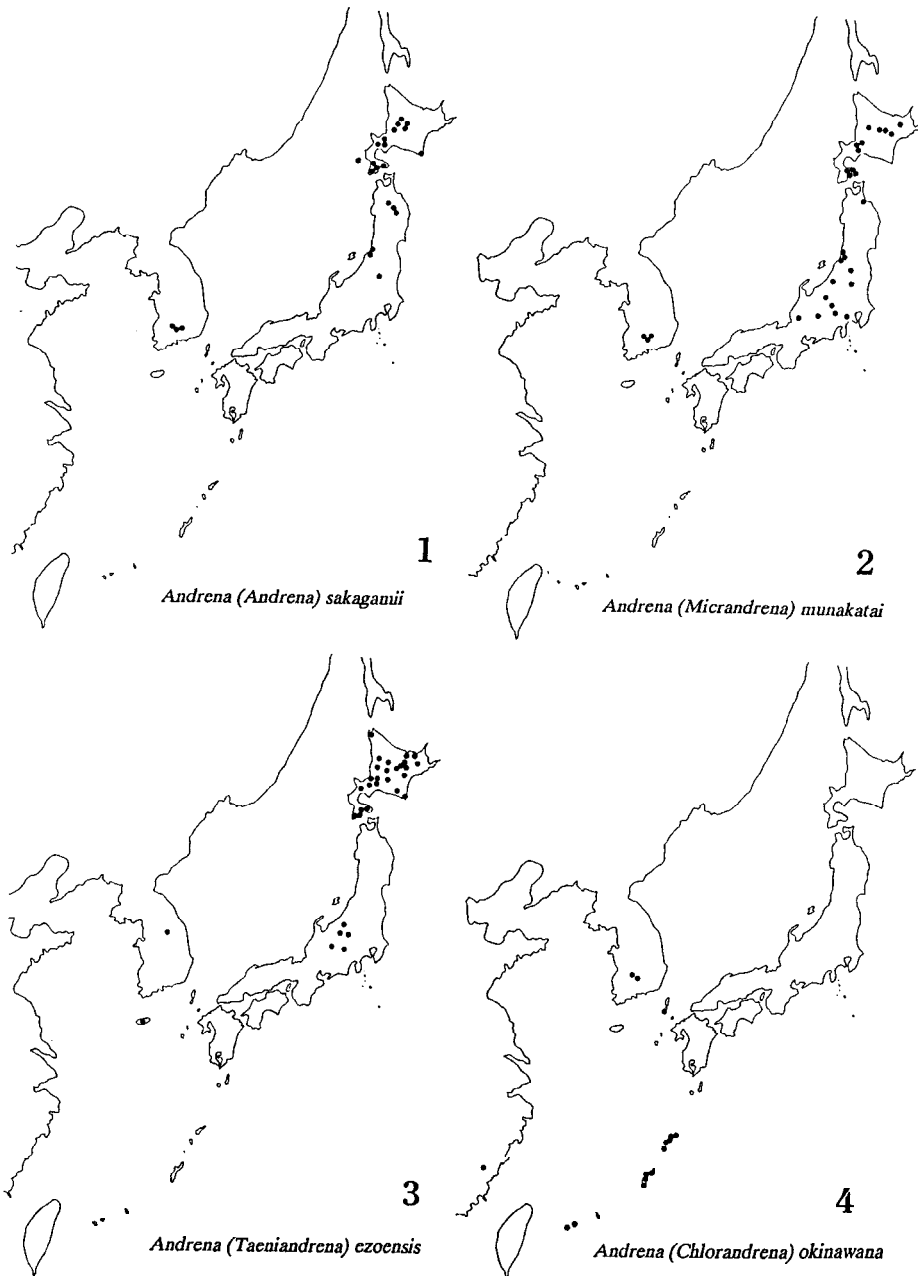
Specimens **examined** : 1 male, Sam Jeon Li, Ma Cheong **Meon**, Hamyang Gun, Kyon Sang Nam Do, 9. v. 1991 (O. Tadauchi); 1 male, same locality and date as above (K. Morimoto); 1 male, same locality and date as above (T. Saigusa); 1 female and 1 male, Kyong Yeo **Meon (alt. 1300m)**, Gurye Gun, Cheon-La Nam Do, 10. v. 1991 (O. Tadauchi); 1 female and 10 males, Sam Jeon Li, Ma Cheong **Meon**, Hamyang Gun, Kyon Sang Nam Do, 11. v. 1991 (O. Tadauchi); 2 males, Sim Won Valley, San Nae **Meon**, Nam **Weon** Gun, Cheon-La Nam Do, 13. v. 1991 (O. Tadauchi); 1 male, Jeong Lyong Chy, San

Nae Meon, Nam Weon Gun, Cheon-La Nam Do, 14. v. 1991 (O. Tadauchi).

Distribution : Korea, Japan (Honshu, Shikoku, Kyushu).

REFERENCES

- Haneda, Y., 1987. Apoidea and the related superfamilies collected by Messrs. Tano and Nosaka in South Korea. Hym. Communication, **Fukui**, (27): 142-149. (In Japanese)
- Hiiashima, Y., 1952-1957. Descriptions and records of bees of the genus *Andrena* from Eastern Asia I-IV. (Hymenoptera, Andrenidae). **Mushi**, **23**: 37-43; **24**: 29-33; **30**: 49-57, 59-66.
- 1962-1966. Systematic and biological studies of the family Andrenidae of Japan (Hymenoptera, Apoidea). Part 2. Systematics, 1-7. **J. Fac. Agr., Kyushu Univ.**, **12**: 117-154, 241-263; **13**: 39-69, 71-97, 461-491, 493-517; **14**: 89-131.
- , O. Tadauchi and H. Suda, 1979. New or little known bees of Japan (Hymenoptera, Apoidea) I. Supplementary note on two *Andrena* species. **Esakia**, (14): 135-143.
- Kim, C-w, 1970. Illustrated Fauna & Flora of Korea **11(3)**. 835 pp., Seoul.
- Kim, M-l. and C-w. Kim, 1983. On the 9 unrecorded Andrenidae from Korea (Hymenoptera: Apoidea). **Kor. J. Ent.**, **13**: 5-9.
- Tadauchi, O. and Y. Hirashima, 1983. New or little known bees of Japan (Hymenoptera, Apoidea) IV. Supplements to *Andrena* (*Simandrena*). **Esakia**, (20): 81-92.
- and ———, 1984a. Ditto, V. Supplements to *Andrena* (*Hoplendrena*). **Kontyû**, **52**: 278-285.
- and ———, 1984b. Synopsis of *Andrena* (*Euandrena*) of Japan (Hymenoptera, Andrenidae). **Esakia**, (22): 107-113.
- 1985. Synopsis of *Andrena* (*Micrandrena*) of Japan (Hymenoptera, Andrenidae) Part I and Part II. **J. Fac. Agr., Kyushu Univ.**, **30**: 59-76, 77-94.
- and Y. Hiiashima, 1986. A list of the superfamily Apoidea (Hymenoptera) of Niigata Prefecture I. Andrenidae. **Trans. Essa Ent. Soc.**, (63): 15-30. (In Japanese)
- , Y. Hirashima and T. Matsumura, 1987. Synopsis of *Andrena* (*Andrena*) of Japan (Hymenoptera, Andrenidae) Part I and Part II. **J. Fac. Agr., Kyushu Univ.**, **31**: 11-35, 37-54.
- 1988a. A list of the family Andrenidae (Hymenoptera, Apoidea) of the Tsushima Island. **Bull. Nagasaki Biol. Soc.**, (33): 1-9. (In Japanese)
- 1988b. Synopsis of *Andrena* (*Stenomelissa*) with a new species from Japan (Hymenoptera, Andrenidae). **J. Fac. Agr., Kyushu Univ.**, **33**: 67-76.
- 1989. Andrenidae. pp.682-685. Supervised by Y. Hirashima, In *A Check List of Japanese Insects*. 1767 pp., Ent. Lab. **Fac. Agr., Kyushu Univ.**, Fukuoka.
- Warncke, K., 1967. Beitrag zur klärung paläarktischer *Andrena*-Arten. **Eos**, **43**: 171-318.
- Wu, C. F., 1941. Apoidea, Andrenidae, Genus *Andrena* Fabricius. pp. 273-277. In *Catalogus Insectorum Sinensium Vol. VI*. 333 pp. Dept. Biol., **Yenching Univ.**, Peking.
- Yasumatsy K., 1940-41. A list of the Far Eastern species of the genus *Andrena* (Hym., Apoidea). **Peking Nat. Hist. Bull.**, **15**: 273-284.
- 1946. *Hymenoptera Aculeata* collected by Mr. K. Tsuneki in North China and Inner Mongolia. III. Apoidea I, **Mushi**, **17**: 19-26.



Figs. 1-4. Maps showing the distribution of *Andrena (Andrena) sakagami* Tadauchi et al. (1), *Andrena (Micrandrena) munakatai* Tadauchi (2), *Andrena (Taeniandrena) czoensis* Hirashima (3) and *Andrena (Chlorandrena) okinawana* Matsumura et Uchida (4).