

See discussions, stats, and author profiles for this publication at:  
<https://www.researchgate.net/publication/271433864>

# Notes on the distribution of the genus *Seladonia* (Hymenoptera, Halictidae) in the Oriental Region

Article · May 2013

---

CITATIONS

0

---

READS

31

3 authors, including:



Ryuki Murao

Regional Environmental Planning C...

46 PUBLICATIONS 41 CITATIONS

SEE PROFILE



Osamu Tadauchi

Kyushu University

129 PUBLICATIONS 156 CITATIONS

SEE PROFILE

## Notes on the Distribution of the Genus *Seladonia* (Hymenoptera, Halictidae) in the Oriental Region

**Ryuki MURAO, Osamu TADAUCHI**

Department of Biological Science, Faculty of Science, Kyushu University,  
Fukuoka, 812–8581 Japan

and

**Takeshi MATSUMURA**

658–72, Sankucho, Nasushiobara, Tochigi Pref., 329–2745 Japan

**Abstract** Distribution data of four *Seladonia* species in the Oriental Region including new localities are reported. New records are as follows: *S. lucidipennis* from Bangladesh, *S. propinqua* from Fujian Prov. (China), and *S. vicina* from both Bangladesh and Hainan Prov. (China).

### Introduction

The sweat bee genus *Seladonia* ROBERTSON (Halictidae, Halictinae) is a nearly cosmopolitan group, with 107 species (ASCHER and PICKERING, 2012). It is characterized by the body with a metallic green or blue-green luster, the straight posterior margin of forth metasomal sternum, and the male genitalia with medial lobe on upper gonostylus. Most species inhabit the warm temperate zone in the Palaearctic Region, with only 9 species occurring in the Oriental Region (PESENKO, 2006). SAKAGAMI and EBMER (1987) reviewed the Oriental species, and additional information was given by DAWUT and TADAUCHI (2000–2002) and by NIU *et al.* (2004) in the revisions of Asiatic or Chinese species. However, information on the *Seladonia* fauna of the Oriental Region is still poor, due to lack of enough material. Recently, the first author, RM had an opportunity to examine the collections of Oriental sweat bees deposited in some institutions and has found some species new to science (MURAO and MATSUMURA, 2011; MURAO, unpublished). In this paper, we report distribution data of some Oriental *Seladonia* species including new localities.

The specimens in the following collections were examined: MAA's collection in the Bernice P. Bishop Museum, Honolulu, Hawaii, USA (BPBM); Entomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, Japan (ELKU); SAKAGAMI's collection in the Museum of Nature and Human Activities, Hyogo, Japan (MNHAH); and personal collection of each author, without abbreviation. The specimens collected by the third author will be deposited in the Natural Historical Museum of Tribhuvan University, Nepal, in the future.

### 1. *Seladonia* (*Seladonia*) *lucidipennis* (SMITH, 1853)

**Specimens examined.** [THAILAND] 2 females, Pi Mai, 50km NE of Nakhon Ratchasima, 4. viii. 1970 (K. YANO, ELKU). [BANGLADESH] 6 females, IPSA Campus Gazipur Distr., 16. i. 1993 (O. TADAUCHI, ELKU, 1 female collected on *Brassica* sp.), 3.

ii. 1993 (O. TADAUCHI, ELKU, 2 females on *Brassica* sp., 2 females on *Brassica pekinensis*), 5. ii. 1993 (O. TADAUCHI, ELKU, on *Calendula officinalis*); 1 female, Raiganj Raiganj Distr., 21. i. 1993 (O. TADAUCHI, ELKU, on *Brassica* sp.); 1 female, Khord, Niomatpur Naogaon Distr., 27. i. 1993 (O. TADAUCHI, ELKU, on *Brassica* sp.); 6 females, Bhawal Nat. Park Gazipur Distr., 31. i. 1993 (O. TADAUCHI, ELKU, on *Anthemis rigescens*), 9. ii. 1993 (O. TADAUCHI, ELKU, on *Cosmos bipinnatus*), 1. iii. 1993 (O. TADAUCHI, ELKU, on *Anthemis rigescens*); 6 females, Nat. Botan. Garden Mirpur, Dhaka, 23. i. 1993 (O. TADAUCHI, ELKU, on *Tagetes patula*), 2. ii. 1993 (O. TADAUCHI, ELKU, on *Cosmos bipinnatus*), 13. ii. 1993 (O. TADAUCHI, ELKU, on *Calendula officinalis*).

**Published records in the Oriental Region.** Pakistan: BLÜTHGEN (1926), SAKAGAMI and EBMER (1987). India: SMITH (1853), BLÜTHGEN (1926, 1931), SAKAGAMI and EBMER (1987), DAWUT and TADAUCHI (2002). Sri Lanka: SMITH (1879), BLÜTHGEN (1926), SAKAGAMI and EBMER (1987), DAWUT and TADAUCHI (2002). Nepal, Thailand: SAKAGAMI and EBMER (1987), DAWUT and TADAUCHI (2002). Myanmar: BLÜTHGEN (1926).

**Distribution.** This species is widely distributed from northern Africa to southeastern Asia (PESENKO, 2006): Cape Verde Islands, Algeria, Tunisia, Libya, Egypt, Sudan, Israel, Arabian Peninsula, Asia Minor, Iran, Iraq, Afghanistan, Turkmenistan, Kyrgyzstan, Mongolia, China, Pakistan, India, Sri Lanka, Nepal, Bangladesh (new record), Myanmar, Thailand.

## 2. *Seladonia (Seladonia) propinqua* (SMITH, 1853)

**Specimens examined.** [NEPAL] 4 females, Kalimati, Kathmandu, 8. iv. 2004 (T. MATSUMURA, on *Antirrhinum* sp.), 18. x. 2004 (T. MATSUMURA, on *Tagetes* sp.); 4 females and 2 males, Kalimati, Kathmandu, 3. vi. 2004, AM10:00–11:00 (T. MATSUMURA, 1 female on *Portulaca* sp., 2 males on *Dahlia* sp.), 4. v. 2004, AM10:30–11:30 (T. MATSUMURA, 2 females on *Coreopsis* sp., 1 female on *Antirrhinum* sp.); 1 male, Swayanbhu, Kathmandu, 23. vi. 2003 (T. MATSUMURA). [CHINA] 1 male, Chungah, Bohea Hill, Fukien (now Fujian Prov.), 6. v. 1938 (T. C. MAA, BPBM); 2 females and 15 males, QiMaba, DolNia Mil, Yunnan Prov., 9. v. 2012 (O. TADAUCHI, ELKU: Code Nos. BeeFTadauchi01011 in female, BeeFTadauchi01000–01008 in male), 10. v. 2012 (O. TADAUCHI, ELKU: Code Nos. BeeFTadauchi01010 in female, BeeFTadauchi00994–00999 in male); 1 male, DolNia, DolNia Mil, Yunnan Prov., 13. v. 2012 (O. TADAUCHI, ELKU: Code No. BeeFTadauchi01009).

**Published records in the Oriental Region.** India: SMITH (1853), CAMERON (1896), VACHAL (1902), SAKAGAMI and EBMER (1987). Nepal, Thailand: SAKAGAMI and EBMER (1987), DAWUT and TADAUCHI (2001). Myanmar: BLÜTHGEN (1926). China (Guangdong and Yunnan Provs.): NIU *et al.* (2004).

**Distribution.** India, Nepal, Myanmar, Thailand, China (Fujian Prov.= new record, Guangdong and Yunnan Provs.).

## 3. *Seladonia (Seladonia) aeraria* (SMITH, 1873)

**Specimens examined.** [JAPAN] 1 female, Cape Hedo, Kunigami-son, Okinawa-jima, Okinawa Pref., Ryukyus, 29. vii. 2011 (R. MURAO). [CHINA] Hunan Prov.: 1 male, Changteh, Yangshan, 11. x. 1938 (T.C. MAA, BPBM). Fujian Prov.: 7 females and 2

males, Shaowu, Tachuland, 20. iv. 1943 (T.C. MAA, BPBM), 7. v. 1942 (T.C. MAA, BPBM), 13. viii. 1945 (T.C. MAA, BPBM), 23. ix. 1942 (T.C. MAA, BPBM), 27. ix. 1943 (T.C. MAA, BPBM); 4 females and 1 male, Chungan, Sanchiang~Miaowan, 1. v. 1942 (T.C. MAA, BPBM), 10. vii. 1943 (T.C. MAA, BPBM); 3 males, Yungan, 15. ii. 1940 (T.C. MAA, BPBM), 1. xii. 1940 (T.C. MAA, BPBM), xii. 1944 (T.C. MAA, BPBM); 1 male, Chungan, Lower Kuatung, 16. x. 1941 (T.C. MAA, BPBM); 1 male, Shaowu city, 6. xi. 1943 (T.C. MAA, BPBM); 1 male, Chungan, Tsiliochiaio, alt. 1000m, 17. x. 1941 (T.C. MAA, BPBM). Zhejiang Prov.: 21 females and 33 males, Mt. Tianmushan, Linan, 18–19. ix. 1995 (O. TADAUCHI, ELKU). [TAIWAN] 1 female, Saramao-Heiganzan, Taichû-shû, 18. vii. 1932 (T. ESAKI, ELKU); 1 female, Musha, 18. v. – 15. vi. 1919 (T. OKUNI *et al.*, MNHAH); 3 females, Wushe, 24. iv. 1974 (M. SHIOKAWA, MNHAH), 25. iv. 1974 (M. SHIOKAWA, MNHAH); 1 female and 1 male, Wushe, Nantou, 29. x. – 2. xi. 1972 (Sk. YAMANE, MNHAH); 12 males, Huanshan, 15. x. 1977 (K. YAMAUCHI, MNHAH); 3 females and 8 males, Meishan, alt. 864m, 100km NE., Kaohsiung, 8–9. ix. 1979 (Y. HIRASHIMA, ELKU).

**Published records in the Oriental Region.** Japan, Ryukyu Islands: MAETA *et al.* (1998), MURAO (2009). Taiwan: STRAND (1914), DAWUT and TADAUCHI (2000). China (Hunan, Zhejiang, Fujian, and Yunnan Provs.): NIU *et al.* (2004).

**Distribution.** Mongolia, Russian Far East, China, Taiwan, Korean Peninsula, Japan.

#### 4. *Seladonia (Seladonia) vicina* (VACHAL, 1894)

**Specimens examined.** [CHINA] 1 female, Jianfengling, Hainan Is., 24. ii. 2009 (T. IIDA). [BANGLADESH] 9 females, Nat. Botan. Garden Mirpur, Dhaka, 23. i. 1993 (O. TADAUCHI, ELKU, 2 females on *Cosmos bipinnatus* and *Tagetes patula*, respectively), 2. ii. 1993 (O. TADAUCHI, ELKU, 2 females on *Cosmos bipinnatus* and *Tagetes patula*, respectively), 13. ii. 1993 (O. TADAUCHI, ELKU, 2 females on *Cosmos sulphureus*, 1 female on *Tagetes patula*), 23. ii. 1993 (O. TADAUCHI, ELKU, on *Tagetes patula*), 2. iii. 1993 (O. TADAUCHI, ELKU, on *Cosmos bipinnatus*); 1 female, Kāohpur, Bandar Narayangon Distr., 18. i. 1993 (O. TADAUCHI, ELKU, on *Brassica* sp.); 5 females and 2 males, Kutambapur Chandina Comilla Distr., 19. i. 1993 (O. TADAUCHI, ELKU, on *Brassica* sp.); 2 females, Simla near Baiganj Serajgonj Distr., 26. i. 1993 (O. TADAUCHI, ELKU, on *Brassica* sp.); 6 females, Bhawai Nat. Park Gazipur Distr., 31. i. 1993 (O. TADAUCHI, ELKU, 4 females on *Anthemis rigescens*), 9. ii. 1993 (O. TADAUCHI, ELKU, 2 females on *Cosmos bipinnatus*); 8 females, ISPA Campus Gazipur Distr., 3. ii. 1993 (O. TADAUCHI, ELKU, 1 female on *Allium fistulosum*, 1 female on *Tagetes patula*), 5. ii. 1993 (O. TADAUCHI, ELKU, 1 female on *Calendula officinalis*), 24. ii. 1993 (O. TADAUCHI, ELKU, 1 female on *Helianthus debilis*), 3. iii. 1993 (O. TADAUCHI, ELKU, 1 female on *Coriandrum sativum* coriander, 1 female on *Brassica pekinensis*), 11. iii. 1993 (O. TADAUCHI, ELKU, 1 female on *Brassica oleracea*, 1 female on *Calendula officinalis*).

**Published records in the Oriental Region.** India: CAMERON (1908), BLÜTHGEN (1926), SAKAGAMI and EBMER (1987), DAWUT and TADAUCHI (2001). Myanmar: VACHAL (1894), BLÜTHGEN (1926). Thailand: COCKERELL (1929), SAKAGAMI and EBMER (1987), DAWUT and TADAUCHI (2001).

**Distribution.** India, Nepal, Bangladesh (new record), Myanmar, Thailand, China (Hainan Prov.: new record, Xinjiang Uygur).

## Acknowledgements

We would like to express our thanks to Dr. Layne WESTOVER (Kyushu Univ.) for his kindness in brushing up an early draft. MURAO would like to thank Mr. Tadashi TANO (Fukui Pref.) for the offer of valuable specimens. TADAUCHI is indebted to the Prof. Cai WANZHI and Dr. Xu HUAN-LI (Department of Entomology, College of Agronomy and Biotechnology, China Agricultural University) for their kind support in the field survey in China. This research was supported in part by the JSPS Institutional Program for Young Researcher Overseas Visits (to R. MURAO), the Environment Research and Technology Development Fund (S-9-2(8)) of the Ministry of the Environment, Japan (to O. TADAUCHI), the JSPS Bilateral Joint Research Projects/Seminars with China (to O. TADAUCHI), and the Grant-in-Aid for scientific Research (B) from the Japan Society for the Promotion of Science (No. 24405016) (Head Investigator: O. TADAUCHI). This is a contribution from the Entomological Laboratory, Faculty of Agriculture, Kyushu University (Ser. 6, No. 123).

## References

- ASCHER, J. S. and J. PICKERING, 2012. Discover Life bee species and world checklist (Hymenoptera: Apoidea: Anthophila). [http://www.discoverlife.org/mp/20q?guide=Apoidea\\_species](http://www.discoverlife.org/mp/20q?guide=Apoidea_species)
- BLÜTHGEN, P., 1926. Beiträge zur Kenntnis der indo-malayischen *Halictus*- und *Thrinchostoma*-Arten (Hym. Apidae. Halictinae.). *Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere*, **51**: 375–698.
- BLÜTHGEN, P., 1931. Beiträge zur Kenntnis der indo-malayischen *Halictus*- und *Thrinchostoma*-Arten (Hym. Apidae. Halictinae.). *Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere*, **61**: 285–346.
- CAMERON, P., 1896. Hymenoptera Orientalia, or contributions to a knowledge of the Hymenoptera of the Oriental Zoological region. Part V. *Memories of the Manchester Literary and Philosophical Society*, **41**: 1–144.
- CAMERON, P., 1908. A contribution to the Aculeate Hymenoptera of the Bombay Presidency. *Journal of Bombay Natural History Society*, **18**: 300–311.
- COCKERELL, T. D. A., 1929. Descriptions and records of bees. CXX. *Annales and Magazine of Natural History, Ser. 10*, **4** (24): 584–594.
- DAWUT, A. and O. TADAUCHI, 2000. A systematic study of the subgenus *Seladonia* of the genus *Halictus* in Asia (Hymenoptera, Apoidea, Halictidae) I. *Esakia*, (40): 63–79.
- DAWUT, A. and O. TADAUCHI, 2001. A systematic study of the subgenus *Seladonia* of the genus *Halictus* in Asia (Hymenoptera, Apoidea, Halictidae) II. *Esakia*, (41): 161–180.
- DAWUT, A. and O. TADAUCHI, 2002. A systematic study of the subgenus *Seladonia* of the genus *Halictus* in Asia (Hymenoptera, Apoidea, Halictidae) III. *Esakia*, (42): 121–150.
- MAETA, Y., Y. HANEDA, R. MIYANAGA and N. SUGIURA, 1998. Distributional records of bees in subtropical region, southwestern Japan, with a list of Apoidea in subtropical region. *Chugoku Kontyu*, (12): 7–12. (In Japanese, with English summary)
- MURAO, R., 2009. New distributional records of *Halictus* (*Seladonia*) *aerarius* SMITH (Hymenoptera, Halictidae) from the Ryukyus, southwestern Japan. *Chugoku Kontyu*, (23): 59. (In Japanese, with English summary)
- MURAO, R. and T. MATSUMURA, 2012. Occurrence of *Lipotriches ceratina* and *Nomia incerta* (Hymenoptera, Halictidae) in Nepal. *Japanese Journal of Systematic Entomology*, **18** (2): 421–423.
- NIU, Z-q., Y-r., WU, and D-w. HUANG, 2004. A taxonomic study on the subgenus *Seladonia* (Hymenoptera: Halictidae) in China with a description of a new species. *Zoological Studies*, **43**: 647–670.
- PESENKO, YuA., 2006. Contributions to the halictid fauna of the eastern Palaearctic region: genus *Seladonia* Robertson (Hymenoptera: Halictidae, Halictinae). *Esakia*, (46): 53–82.
- SAKAGAMI, S. F. and A. W. EBMER, 1987. Taxonomic notes on Oriental halictine bees of the genus *Halictus* (subgen. *Seladonia*) (Hymenoptera Apoidea). *Linzer biologische Beiträge*, **19**: 301–357.

- SMITH, F., 1853. *Catalogue of Hymenopterous Insects in the Collection of the British Museum. Part I. Andrenidae and Apidae*. London: British Museum of Natural History. 195 pp., pls. I–VI.
- SMITH, F., 1879. *Descriptions of New Species of Hymenoptera in the Collection of the British Museum*. London: British Museum, xxi + 240 pp.
- STRAND, E., 1914. H. Sauter's Formosa-Ausbeute. Apidae II. (Die *Halictus*-Arten von Formosa). *Archiv für Naturgeschichte, Abt. A*, (1913), **79**(12): 147–171.
- VACHAL, J., 1894. Viaggio di Leonardo Fea in Birmania e regioni vicine. LXII. Nouvelles espèces d'hyménoptères des genres *Halictus*, *Prosopis*, *Allodape* et Nomioides rapportées par M. Fea de la Birmanie et décrites par M. J. VACHAL. *Annali del Museo Civico di Storia naturale di Genova*, **24**: 428–449.
- VACHAL, J., 1902. *Halictus* nouveaux ou litigieux de la collection Radoszkowski (Hym., Apoidea). *Russkoe Entomologicheskoe Obozrenie (Russian Entomological Review)*, **2**: 225–231.

[Received April 9, 2013; accepted April 19, 2013]