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NEW RECORDS OF VELVET ANTS (HYMENOPTERA: MUTILLIDAE) FROM CHINA WITH TAXONOMIC NOTES

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Summary. The genera *Cystomutilla* André, *Promecilla* André, *Kurzenkotilla* Lelej, *Nonveilleridia* Lelej, and species *C. teranishii* Mickel, *K. annamensis* Lelej, *N. bataviana* André, *Mickelomyrme exiloides* (Magretti) are newly recorded from China. Two new combinations are proposed for *Mickelomyrme chinensis* (Smith, 1855), **comb. n.** and *Promecilla levinaris* (Chen, 1957), **comb. n.** (both are from the genus *Smicromyrme* Thomson). The specific status of *Orientilla chinensis* (Zavattari, 1922) is resurrected from the synonyms. A new synonymy is proposed: *Mickelomyrme chinensis* (Smith, 1855) = *Mutilla exacta* Smith, 1879, **syn. n.**; *Orientilla chinensis* (Zavattari, 1922) = *Stenomutilla tausignata* Chen, 1957, **syn. n.** The mutillid fauna of China numbers 165 species in 34 genera, including current data.

Key words: Hymenoptera, Mutillidae, new synonymy, fauna, new records, China, Oriental region.

**Х. Т. Чжоу, А. С. Лелей, Ц. С. Лю. Новые находки ос-немок (Нимено-
птера: Mutillidae) из Китая с заметками по систематике // Дальневосточ-
ный энтомолог. 2018. N 354. С. 23-28.**

Резюме. Впервые из Китая указываются 4 рода (*Cystomutilla* André, *Promecilla* André, *Kurzenkotilla* Lelej, *Nonveilleridia* Lelej) и 4 вида – *C. teranishii* Mickel, *K. annamensis* Lelej, *N. bataviana* André, *Mickelomyrme exiloides* (Magretti). Новые комбинации предложены для *Mickelomyrme chinensis* (Smith, 1855), **comb. n.** и *Promecilla levinaris* (Chen, 1957), **comb. n.** (оба из рода *Smicromyrme* Thomson). Видовой статус *Orientilla chinensis* (Zavattari, 1922) восстановлен из синонимов. Предлагается новая синонимия: *Mickelomyrme chinensis* (Smith, 1855) = *Mutilla exacta* Smith, 1879, **syn. n.**; *Orientilla chinensis* (Zavattari, 1922) = *Stenomutilla tausignata* Chen, 1957, **syn. n.** С учетом настоящей работы фауна ос-немок Китая насчитывает 165 видов из 34 родов.

INTRODUCTION

This study is based on the examination of 69 specimens (20♀ and 49♂). The following acronyms are used for the collections where type specimens and other materials are deposited: BMNH – Natural History Museum, London, Great Britain; IBSS – Federal Scientific Center

of the East Asia Terrestrial Biodiversity (former Institute of Biology and Soil Science), Vladivostok, Russia; MSNG – Museo Civico di Storia Naturale “G. Doria”, Genoa, Italy; RMNH – Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands; SCAU – Hymenopteran Collection of South China Agricultural University, Guangzhou, China; SDEI – Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany; SYSM – The Museum of Biology, Sun Yat-sen University, Guangzhou, China; TARI – Taiwan Agricultural Research Institute, Taichung, Taiwan; ZMMU – Zoological Museum of Moscow State University, Russia.

During our study of Mutillidae we discovered four genera and four species which are newly recorded from China and two new synonyms for the species which are distributed in China. The classification of the Mutillidae follows Brothers and Lelej (2017). The general distribution of the species follows Lelej (2005) with addition. The new record is asterisked (*).

NEW RECORDS WITH TAXONOMIC NOTES

Genus *Cystomutilla* André, 1896

Type species: *Mutilla ruficeps* Smith, 1855, by original designation.

NOTES. The genus belongs to the subfamily Sphaeropthalminae (tribe Sphaeropthalmini) and includes two Palaearctic species (Tu *et al.*, 2014). The genus is newly recorded from China.

Cystomutilla teranishi Mickel, 1935

Cystomutilla teranishi Mickel, 1935: 196, ♀ (holotype, ♀, Japan, Jozankei, Hokkaido, 4.VIII 1922, C. Teranishi; in University of Minnesota, USA).

MATERIAL EXAMINED. **China:** Shaanxi Mt. Taibai, 10.VIII 2015, 1♀, No. 2016000202 (SCAU).

DISTRIBUTION. *China (Shaanxi), Japan (Hokkaido, Honshu, Shikoku, Tsushima), Republic of Korea.

Genus *Orientilla* Lelej, 1979

Type species: *Orientilla vietnamica* Lelej, 1979, by original designation.

NOTES. The genus belongs to the subfamily Dasylabrinae (tribe Dasylabrini) and includes 11 species from Oriental region (Lelej, 2005). Two species are distributed in China.

Orientilla chinensis (Zavattari, 1922), stat. resurr.

Stenomutilla chinensis Zavattari, 1922: 192, ♂ (lectotype, designated here, ♂, Sud-China, Pingshiang; in SDEI).

Stenomutilla tau-signata Chen, 1957: 221, ♀ (holotype, ♀, China, Fukien (Fujian), Kienyang (Liutum), 15–16.VIII 1945, K.S. Lin; in TARI), **syn. n.**

Orientilla variegata: Lelej, 1996a: 106, ♂, partim.

Orientilla desponsa: Lelej, 2005: 111, ♂, partim.

TYPE MATERIAL. Lectotype of *S. chinensis*, designated here, ♂, Pingshiang, Sud-China (**China**, Guangxi), Dr. Kreyenberg [printed] / Paratype *Stenomutilla chinensis* Zav. [handwritten] (SDEI). Paralectotype of *S. chinensis*, 1♂ with the same labels (SDEI).

OTHER MATERIAL EXAMINED. **China:** Guangxi, Longjin, Daqingshan Mountain, 240 m, 19.IX 1958, Chen Yi-xin, 1♀ (SYSM); Hunan, Tai Kwong Village, Lan Mo District, 26–28.VII 1934, F.K. To, 1♀, 1♂ (SYSM); same place, 23–25.VII 1934, F.K. To, 1♂ (SYSM); Guangdong, Maozifeng, 22.VII 2016, Xu Zai-fu, 1♀, No. 2016000129 (SCAU); Shimen Forest Park, 5–6.XI 2005, Xu Zai-fu 1♂, No. 2015000162 (SCAU); Siu-ping, Tin-tong, Loh-chang District (Lechang), 7.IX 1947, Tsang & Lam, 1♀, En-105560 (SYSM); same place, 10.VIII 1947, Tsang & Lam, 1♀ (SYSM); same place, 6.VIII 1947, Tsang & Lam, 1♀ (SYSM); Fong Tong Ping, Hoh Kai Hon, Lin-hsien District, 4–5.VII 1934, F.K. To, 1♂, En-105450 (SYSM); same place, 6–7.VII 1934, F.K. To, 1♂, En-105451 (SYSM); Yam Na Shan (Yinna Mountain), Mei-hsien District, 13–18.IX 1933, F.K. To, 1♂, En-105472 (SYSM); Hepingxian, 16.VII 1989, Chen Zhen-yue, 1♀ (SYSM); Dadag Mountain, 3–9.VII 2008, Han Xiao-lei, 1♂ (SYSM); Hainan Il., Tsing-to, (Sam-kok-long), 9 km SE of Nodoa, Lin-kao District, 14–18.VII 1932, O.K. Lau & F.K. To, 1♂, En-105467 (SYSM).

DISTRIBUTION. China (Anhui, Hunan, Jiangxi, Zhejiang, Fujian, Guangxi, Guangdong, *Hainan).

NOTES. One male and one female of *Orientilla chinensis* were collected in Tai Kwong Village, Lan Mo District (Hunan), 26–28.VII 1934 and we regard them as an opposite sexes of the same species. There is no direct evidence (pair collected *in copula*) to support the relationship. The second species of genus, *O. desponsa* (Smith), is known for both sexes.

Geuns *Kurzenkotilla* Lelej, 2005

Type species: *Artiotilla ariana* Lelej, 1980, by original designation.

NOTES. The genus belongs to the subfamily Mutillinae (tribe Mutillini, subtribe Mutillina) and includes one Palaearctic and three Oriental species (Lelej, 2005). The genus is newly recorded from China.

Kurzenkotilla annamensis Lelej, 2005

Kurzenkotilla annamensis Lelej, 2005: 171, ♀ (holotype, ♀, Vietnam, Prov. Nghe Anh (Khu Bon Cu), Con River, Naca, 200 m, 8.IX 1963, N. Kabakov; in IBSS, examined).

MATERIAL EXAMINED. **China:** Hainan, Xinglong Frost Park, 5.IV 1959, 1♀ (Hainan team) (SYSM).

DISTRIBUTION. *China (Hainan), Vietnam (Nghe Anh).

Genus *Mickelomyrme* Lelej, 1995

Type species: *Mutilla hageni* Zavattari, 1913, by original designation.

NOTES. The genus belongs to the subfamily Mutillinae (tribe Smicromyrmini) and includes 20 species from Oriental region and Eastern Palaearctic (Lelej, 2005). Seven species are distributed in China.

Mickelomyrme chinensis (Smith, 1855), comb. n.

Mutilla chinensis Smith, 1855: 38, ♀ (holotype, ♀, North China; in BMNH).

Smicromyrme chinensis: Lelej, 2005: 58, ♀.

Mutilla exacta Smith, 1879: 210, ♂, (holotype, ♂, Shanghai; in BMNH), **syn. n.**

MATERIAL EXAMINED. **China:** Guangdong, Liuxihe National Forest Park, 1–4.VI 2007, Xu Zai-fu, 2♂, No. 201301977, 201302006 (SCAU); Nanling National Nature Reserve,

9–18.VII 2004, Ma Juan-juan, 2♂, No. 2015000055, 2015000077 (SCAU); same place, 16–21.VII 2008, Xu Zai-fu, 2♂, No. 2017000022, 2016000263 (SCAU); same place, 17.VII 2008, Xu Zai-fu, 2♀, No. 2015000101, 2015000103 (SCAU); same place, 9–19.VII 2005, Xiao Bing, 1♀, No. 2015000545 (SCAU); same place, 22–24.VII 2010, Xu Zai-fu, 1♀, No. 2015000392 (SCAU); Chebaling National Nature Reserve, 22–28.VII 2008, Xu Zai-fu, 4♂, 1♀, No. 2016000092, 2016000094, 2016000095, 201300263, 2016000167 (SCAU); same place, 20, 21.VI 1990, A. Lelej, 2♂ (IBSS); Nankun Mountain, 30.VI 2015, Li Yi-cheng, 1♀, No. 2015000212 (SCAU); Hainan, Diaolu Mountain, 9.VII 2006, Liu Yan-rong, 1♂, No. 2016000256 (SCAU); same place, 28.V–1.VI 2007, Zeng Jie, 1♂, No. 2015000599 (SCAU); Wuzhi, Mountain, 16–20.V 2007, Weng Li-qiong, 1♂, No. 2016000154 (SCAU); Fujian, Huangzhulin, 13–17.VII 2015, Liu Jing-xian, 7♂, No. 2017000001, 2017000002, 2017000003, 2017000004, 2017000005, 2017000006, 2017000007 (SCAU); Guangxi, Mulun, 19.VII 2015, Feng Jun, 1♀, No. 2016000052 (SCAU); Gao Zhai, Xing An County, 300 m, 15.IX 2000, Sk. Yamane, 1♀ (IBSS); Yunnan, Gongshan, 1–18.VII 2005, Ma Juan-juan, 1♀, No. 2015000516 (SCAU); Sichuan, Wumeng Shan, 24, 25.VI 1955, Huang Re-ren, 3♂ (ZMMU). **Vietnam:** Ninh Binh, Cuc Phuong National Park, 20°21'N, 105°36'E, 200 m, 7–9.V 2002, S. Belokobylskij, 1♀ (ZISP).

DISTRIBUTION. China (Shanxi, Shanghai, Jiangsu, Anhui, Jiangxi, Zhejiang, Guangdong, *Fujian, *Guangxi, *Hainan, Sichuan, *Yunnan); *Vietnam (Ninh Binh).

NOTES. *Mickelomyrme chinensis* is the largest species among seven species of *Mickelomyrme* which occur in China. Four males and three females of *M. chinensis* were collected in Nanling National Nature Reserve and even by the same collector in the same days (16–21.VII 2008, 2♂, 2♀) and Chebaling National Nature Reserve (22–28.VII 2008, 4♂, 1♀) and we regard them as an opposite sexes of the same species. There is no direct evidence (pair collected *in copula*) to support the relationship.

Mickelomyrme exiloides (Magretti, 1892)

Mutilla exiloides Magretti, 1892: 232, ♂, (syntypes, ♂, Carin-Cheba (Myanmar); in MSNG).
Mickelomyrme exiloides: Lelej, 1996b: 285, ♂ (Myanmar, Laos)

MATERIAL EXAMINED. **China:** Yunnan, Nabanhe, 19–23.VII 2011, 4♂, Wei Na-sen, No. 2015000339, 2015000581, 2015000585, 2015000586 (SCAU).

DISTRIBUTION. *China (Yunnan), Myanmar, Laos.

Genus *Promecilla* André, 1902

Type species: *Mutilla regia* Smith, 1885, by original designation.

NOTES. The genus belongs to the subfamily Mutillinae (tribe Smicromyrmini) and includes three Palaearctic, 19 Oriental and six Afrotropical species (Lelej, 2007). The genus is newly recorded from China.

Promecilla levinaris (Chen, 1957), comb. n.

Smicromyrme levinaris Chen, 1957: 207. ♂ (holotype, ♂, China, Fukien (Fujian), Yungan, 12.VI 1940, at night; in TARI).

MATERIAL EXAMINED. **China:** Guangdong, Mt. Guanyin, 15.IV 2004, Xu Zai-fu, 1♂, No. 2016000015 (SCAU); Guizhou, Mayang River, 27.VIII–2.X 2007, Xie Ju-hua, 1♂, No. 2016000006 (SCAU); Yunnan, Mangshi, 900 m, 18.V 1955, 1♂, V. Popov (ZMMU).

DISTRIBUTION. China (*Guangdong, *Guizhou, Fujian, *Yunnan).

***Nonveilleridia* Lelej, 1996**

Type species: *Mutilla bataviana* André, 1909, by original designation.

NOTES. The genus *Nonveilleridia* belongs to the subfamily Mutillinae (tribe Trogapidiini) and includes one Oriental species (Lelej, 2005). The genus is newly recorded from China.

***Nonveilleridia bataviana* André, 1909**

Mutilla bataviana André, 1909: 177, ♂ (holotype, ♂, Java (Indonesia); in RMNH).

MATERIAL EXAMINED. **China:** Hainan, Yinggeling, 28.V–3.VI 2007, Weng Li-xiong, 1♂, No. 2015000523 (SCAU); Guangxi, Youma town, 15–18.VI 2014, Yang Shi-wan, 1♂, No. 2016000231 (SCAU); Guangdong, Dinghushan 2–6.VII 2010, Liu Jing-xian, 1♂, No. 2016000028 (SCAU). **Thailand:** Kanchanaburi, 12.IV 1989, 1♂, W.J. Pulawski (California Academy of Sciences, San-Francisco, USA); Nong Khai, 17°52'N, 102°44'E, 29.VIII 1996, 1♂, M. Hauser (IBSS).

DISTRIBUTION. *China (Hainan, Guangxi, Guangdong), Indonesia (Java), South Vietnam, *Thailand.

CONCLUSION

The mutillid fauna of China numbers 165 species in 34 genera and seven subfamilies, including current data.

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REFERENCES

- André, E. 1909. Mutilides nouveaux ou imparfaitement connus du Musée royal d'histoire naturelle de Leide. *Notes from the Leyden Museum*, 31: 171–180.
Brothers, D.J. & Lelej, A.S. 2017. Phylogeny and higher classification of Mutillidae (Hymenoptera) based on morphological reanalyses. *Journal of Hymenoptera Research* 60: 1–97. DOI: <https://doi.org/10.3897/jhr.60.20091>
Chen, C.-W. 1957. A revision of the velvet ants or Mutillidae of China. *Quarterly Journal of the Taiwan Museum*, 10(3/4): 135–224 + 6 pls.
Lelej, A.S. 1996a. A review of the East Asian species of *Orientilla* (Hymenoptera, Mutillidae). *Memoirs of the Entomological Society of Washington*, 17: 103–107.
Lelej, A.S. 1996b. A review of the East Asian species of *Mickelomyrme* Lelej, 1995 (Hymenoptera, Mutillidae). *Entomofauna*, 17(15): 277–290.
Lelej, A.S. 2005. *Catalogue of the Mutillidae (Hymenoptera) of the Oriental region*. Dalnauka, Vladivostok. 252 pp.

- Lelej, A.S. 2007. Biogeography of mutillid wasps (Hymenoptera, Mutillidae). P. 82–111. In: Rasnitsyn, A.P. & Gokhman V.E. (Eds), *Studies on Hymenopterous Insects*. KMK Scientific Press, Moscow. [In Russian]
- Magretti, P. 1892. Viaggio di Leonardo Fea in Birmania e regioni vicini. 43. Imenotteri. Parte prima. Mutillidei, Scoliidei, Tiphidei, Tinnidei colla descrizione di parecchie nuove specie. *Annali del Museo Civico di Storia Naturale di Genova*, 2(12): 196–266 + pl. 5.
- Mickel, C.E. 1935. The mutillid wasps of the islands of the Pacific Ocean (Hymenoptera: Mutillidae). *Transactions of the Royal Entomological Society of London*, 83(2): 177–312.
- Smith, F. 1855. *Catalogue of Hymenopterous Insects in the Collection of the British Museum. Part III. Mutillidae and Pompilidae*. Taylor and Francis, London. 206 pp. + 5 pls.
- Smith, F. 1879. *Descriptions of New Species of Hymenoptera in the collection of the British Museum*. Taylor and Francis, London. XXI + 240 pp.
- Tu, B.-B. Lelej, A.S. & Chen, X.-X. 2014. Review of the genus *Cystomutilla* André, 1896 (Hymenoptera: Mutillidae: Sphaeropthalminae: Sphaeropthalmini), with description of the new genus *Hemutilla* gen. nov. and four new species from China. *Zootaxa*, 3889(1): 71–91. DOI: <http://dx.doi.org/10.11646/zootaxa.3889.1.4>
- Zavattari, E. 1922. Eine neue Mutille von China. *Entomologische Mitteilungen*, 11(4): 192.