

NEW DATA ON *HALTICOPTERA* SPINOLA, 1811 AND *SPHEGIGASTER* SPINOLA, 1811 (CHALCIDOIDEA: PTEROMALIDAE) FROM CHINA

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Summary. An annotated list of 6 species of *Halticoptera* Spinola, 1811 and 9 species of *Sphegigaster* Spinola, 1811 is given. *Halticoptera smaragdina* (Curtis) has been recorded in the fauna of the Eastern Palearctic for the first time, as have *H. rasnitsyni* (Dzhanokmen) and *S. glabrata* Graham in China and *H. hippeus* (Walker), *S. cirrhocornis* Huang, *S. fusca* Huang, *S. hypocyrta* Huang, *S. intersita* Graham, *S. pulchra* 1990, *S. truncatus* Thomson, *S. venusta* Huang and *S. yunnanensis* Özdikmen in Xinjiang, China.

Key words: Chalcidoidea, Pteromalidae, fauna, parasitoids, new records, annotated list, Eastern Palearctic, China.

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Резюме. Приведен аннотированный список 6 видов *Halticoptera* Spinola, 1811 и 9 видов *Sphegigaster* Spinola, 1811. Для фауны Восточной Палеарктики впервые указан *Halticoptera smaragdina* (Curtis), для фауны Китая – *H. rasnitsyni* (Dzhanokmen) и *S. glabrata* Graham, а виды *H. hippeus* (Walker), *H. patellana* (Dalman), *S. cirrhocornis* Huang, *S. fusca* Huang, *S. hypocyrta* Huang, *S. intersita* Graham, *S. pulchra* 1990, *S. truncatus* Thomson, *S. venusta* Huang и *S. yunnanensis* Özdikmen впервые приводятся для провинции Синьцзян.

INTRODUCTION

Genera *Halticoptera* Spinola, 1811 and *Sphegigaster* Spinola, 1811 belong to the subfamily Miscogasterinae Walker, 1833 and the tribe Sphegigastrini Thomson, 1876 (Burks *et al.*, 2022). The list of species of *Halticoptera* distributed in China currently includes 16 species, and the list of species of *Sphegigaster* includes 17 species (Huang & Xiao, 2005; UCD Community, 2025).

During our study of new material in the collection of the College of Life Science and Technology, Xinjiang University (Urumqi, China; ICXU), many species were recorded for the first time for the fauna of Eastern Palearctic, China and Xinjiang Province. The annotated list below substantially fills a gap in the data on the taxonomic composition of the Pteromalidae of one of the most interesting areas of the Eastern Palearctic.

MATERIAL AND METHODS

The study is based on examination of material in the collection of College of Life Science and Technology, Xinjiang University (ICXU). Specimens were examined using a Nikon SMZ745 microscope. The material was obtained by sweeping-net methods of collecting. Data of biology and distribution are cited after (Huang & Xiao, 2005; Tselikh, 2019; UCD Community, 2025). New records of the species from Eastern Palearctic are asterisked (*), China (**) and Xinjiang Provinces (***).

LIST OF THE SPECIES

Subfamily Miscogasterinae Walker, 1833

Halticoptera circulus (Walker, 1833)

MATERIAL EXAMINED. China: Xinjiang, Kashgar, Atush, Songtake Township, Alfalfa Field, H: 1303 m, 22.VII.2008, 1 ♀, coll. H. Hu; Jinghe County, Mangding Township, Xiaozhuangzi Village, H: 288 m, 31.VII.2010, 1 ♀, coll. H. Hu; Yanqi County, Yongding Town, Malian Village, H: 1102 m, 6.VIII.2010, 1 ♀, coll. H. Hu; Altun Mountains, Altatihan Exit Inspection, H: 3556 m, 17.VII.2012, 1 ♀, coll. H. Hu, Zh. Aishan, J. Wu, L. Yi; Mulei County, Xinhua Town, H: 1163 m, 29.VII.2012, 1 ♀, coll. H. Hu; Tiemenguan City, Boguqi Town, Tuanjie Road, 41°48'08.85"N, 86°2'01.98"E, H: 892 m, 18.VII.2022, 2 ♀, coll. Q. Li; Awat County, Duolang Town, G 580 (Friendship Road), 40°39'39.89"N, 80°22'23.68"E, H: 1038.8 m, 22.VII.2022, 3 ♀, coll. Q. Li; Jiashi County, Jiangbazi Town, Abandoned Park beside Yingbin Road, 39°29'21.99"N, 76°42'57.22"E, H: 1211.6 m, 27.VII.2022, 1 ♂, coll. Q. Li; Aral City, Tokay Town, Pear Orchard, 40°42'33.68"N, 80°19'36.31"E, H: 957.32 m, 6.VIII.2023, 6 ♀, 4 ♂, coll. Q. Li; Aral, Tokay Town, Walnut Plantation, Team 1, 40°32'18.72"N, 81°06'35.78"E, H: 957.45 m, 6.VIII.2023, 1 ♀, 1 ♂, coll. Q. Li; Aral City, Tokay Town, Pear Orchard, 40°32'42.5"N, 81°08'47.6"E, H: 957.32 m, 6.VIII.2023, 2 ♂, coll. Q. Li; Xinhe County, Weigan Town, 41°32'03.67"N, 82°33'06.58"E, H: 959.5 m, 8.VIII.2023, 1 ♀, coll. Q. Li; Baicheng County, Mijik Town, Walnut Orchard, 41°45'58.31"N, 81°49'29.69"E, H: 1183 m, 10.VIII.2023, 1 ♀, 1 ♂, coll. Q. Li; Baicheng County, Kangqi Town, European Plum Orchard, 41°47'21.46"N, 81°53'51.34"E, H: 1175.08 m, 10.VIII.2023, 2 ♀, coll. Q. Li; Wushi County, Aheya Town, Walnut Orchard, 41°10'44.85"N, 79°44'52.81"E, H: 1159.07 m, 11.VIII.2023, 1 ♀, coll. Q. Li; Wushi County, Aheya Town, Walnut Plantation, 4°06'58.65"N, 79°52'01.34"E, 11.VIII.2023, 1 ♀, coll. Q. Li; Wensu County, Tuo'hula Town, Walnut Plantation, 41°15'11.51"N, 80°12'06.84"E, H: 1087 m, 11.VIII.2023, 6 ♀, 4 ♂, coll. Q. Li; Kalpin County, Yulgi Town, Mixed Woodland, 40°32'15.08"N, 79°00'11.23"E, H: 1158.18 m, 12.VIII.2023, 4 ♀, coll. Q. Li; Kalpin County, Kalpin Town, Apricot Grove, 40°31'01.71"N, 79°04'21.04"E, H: 1109.68 m, 12.VIII.2023, 3 ♀, 1 ♂, coll. Q. Li; Awat County, Apricot Grove, Malaise trap, 40°37'53"N, 80°21'44.27"E, H: 1047.8 m, 1–15.VI.2024, 2 ♀, coll. Q. Li; Kuqa City, beside Township

Road 673, Apricot Orchard No. 61, Group 4, Malaise trap, 41°44'14.53"N, 83°11'33.68"E, H: 982.3 m, 16–30.VI.2024, 1 ♀, coll. Q. Li; Shaya County, Shaya Town, Pear Orchard beside S211, Malaise trap, 41°15'57.05"N, 82°45'11.35"E, H: 942.32 m, 16–31.VII.2024, 4 ♀, coll. Q. Li; Aksu City, Kumbash Town, Bagawan Village, Walnut Orchard, Malaise trap, 40°55'27.17"N, 80°17'0.95"E, H: 1010 m, 16–31.VII.2024, 2 ♀, coll. Q. Li.

DISTRIBUTION. Europe, Russia (European part, Far East), Armenia, Azerbaijan, Turkey, Iraq, Jordan, Iran, Kazakhstan, China (Xinjiang, Inner Mongolia, Beijing, Ningxia, Hebei, Shanxi, Shandong, Gansu, Shaanxi, Jiangsu, Xizang, Hunan, Fujian, Yunnan, Taiwan, Hainan), Korean Peninsula, Japan, North America, Afrotropics, South America.

BIOLOGY. Primary parasitoid of dipterans of the families Agromyzidae, Cecidomyiidae, Chloropidae and Opomyzidae.

REMARKS. The colour of the scape and legs varied from green with metallic diffuse coppery luster to yellowish brown.

******Halticoptera hippeus* (Walker, 1839)**

MATERIAL EXAMINED. China: Xinjiang, Barkol County, Haiziyan Town, H: 1687 m, 31.VII.2012, 1 ♂, coll. H. Hu.

DISTRIBUTION. Europe, Russia (European part, Far East), China (Xinjiang, Liaoning, Inner Mongolia, Hebei).

BIOLOGY. Unknown.

***Halticoptera patellana* (Dalman, 1818)**

MATERIAL EXAMINED. China: Xinjiang, Altun Nature Reserve, Shazi Spring, H: 3963 m, 22.VII.2011, 1 ♂, coll. H. Hu, Zh. Aishan, J. Wu, L. Yi; Awat County, Dolan Town, 40°42'33.7"N, 80°19'36.3"E, H: 995.63 m, 13.VIII.2023, 1 ♂, coll. Q. Li.

DISTRIBUTION. Europe, Russia (European part, Far East), Turkey, China (Xinjiang, Inner Mongolia, Xizang, Taiwan), Japan, North America, South America.

BIOLOGY. Primary parasitoid of coleopterans of the family Scolytidae, dipterans of the families Agromyzidae, Cecidomyiidae, Chloropidae, Drosophilidae, Tephritidae and lepidopterans of the family Lyonetiidae.

*****Halticoptera rasnitsyni* (Dzhanokmen, 2011)**

MATERIAL EXAMINED. China: Xinjiang, Hami City, V.2002, 1 ♂, coll. H. Hu; Qitai County, Desert along S228 Highway, H: 829 m, 29.VII.2012, 1 ♂, coll. H. Hu; Yanqi County, Qigexing Town, Hebei-Bazhou Eco-Industrial Park, beside G218 National Highway, 42°13'39.75"N, 87°50'5.92"E, H: 1068 m, 17.VII.2021, 1 ♂, coll. Q. Li; Wensu County, Kizil Town, Kalak Village, Cultivated Alfalfa Field, 40°30'50.25"N, 80°19'44.24"E, H: 1005.4 m, 20.VII.2022, 1 ♀, coll. Q. Li; Aral City, Weeds under mixed forest beside G217 National Highway, 41°11'40.16"N, 80°27'21.45"E, H: 1141 m, 29.VII.2022, 1 ♀, coll. Q. Li; Aral City, Tokay Town, Pear Orchard, 40°32'42.5"N, 81°08'47.6"E, H: 957.32 m, 6.VIII.2023, 1 ♀, 4 ♂, coll. Q. Li; Aral City, Tokay Town, 40°32'24.5"N, 81°06'50.0"E, H: 954.61 m, 6.VIII.2023, 1 ♂, coll. Q. Li.

DISTRIBUTION. Kazakhstan, China (Xinjiang).

BIOLOGY. Unknown.

****Halticoptera smaragdina* (Curtis, 1832)**

MATERIAL EXAMINED. China: Xinjiang, Hutubi County, Datagou, H: 1816 m, 11.VII.2013, 2 ♀, 1 ♂, coll. Q. Li, Ch. Wang, W. Cao; H: 1974 m, 11.VII.2013, 2 ♀, coll. Q. Li, Ch. Wang, W. Cao.

DISTRIBUTION. Europe, Russia (European part), China (Xinjiang), South America.

BIOLOGY. Primary parasitoid of dipterans of the families Agromyzidae, Drosophilidae and Tephritidae.

***Halticoptera trinflata* Huang, 1991**

MATERIAL EXAMINED. China: Xinjiang, Altun Mountain, Qimantag Mountain riverside, H: 4152 m, 19.VII.2011, 1 ♂, coll. H. Hu, Zh. Aishan, J. Wu, L. Yi; Huocheng County, Langgar Town, Wenhua Village, H: 661 m, 22.VII.2010, 1 ♂, coll. H. Hu; Altun Mountains, Grassland on the east side of Aqike Lake, H: 4300 m, 24.VII.2011, 1 ♂, coll. H. Hu, Zh. Aishan, J. Wu, L. Yi.

DISTRIBUTION. China (Xinjiang).

BIOLOGY. Unknown.

******Sphegigaster cirrhocornis* Huang, 1990**

MATERIAL EXAMINED. China: Xinjiang, Burqin County, Woyimoke Town, Weeds 50m south of S227, H: 420 m, 25.VI.2021, 1 ♀, coll. Q. Li.

DISTRIBUTION. China (Xinjiang, Yunnan).

BIOLOGY. Unknown.

******Sphegigaster fusca* Huang, 1990**

MATERIAL EXAMINED. China: Xinjiang, Awat County, Aybage Town, Alfalfa Field under Poplar Trees beside X360, 41°31'56.94"N, 80°23'22.72"E, H: 1036 m, 22.VII.2022, 2 ♀, coll. Q. Li; Aksu City, Dongpo Road, Apple Orchard, Horticultural Fourth Branch Village, Malaise trap, 41°17'8.07"N, 80°17'59.10"E, H: 1135 m, 16–31.V.2024, 2 ♀, coll. Q. Li; Aksu City, Kumbash Town, Bagawan Village, Walnut Orchard, Malaise trap, 40°55'27.17"N, 80°17'0.95"E, H: 1010 m, 1–15.VI.2024, 1 ♀, coll. Q. Li; Kuqa City, beside Town Road 673, Apricot Orchard No. 61, Malaise trap, 41°44'14.52"N, 83°11'33.67"E, H: 982 m, 1–15.VII.2024, 1 ♀, coll. Q. Li.

DISTRIBUTION. China (Xinjiang, Yunnan).

BIOLOGY. Unknown.

*****Sphegigaster glabrata* Graham, 1969**

MATERIAL EXAMINED. China: Xinjiang, Xinyuan County, Aleemale Town, Wild Fruit Forest at the Improvement Farm, H: 1406 m, 5.VII.2016, 1 ♀, coll. Q. Li.

DISTRIBUTION. Europe, Kazakhstan, China (Xinjiang).

BIOLOGY. Primary parasitoid of *Melanagromyza simplicoides* Hendel, 1920 (Diptera, Agromyzidae).

******Sphegigaster hypocyrta* Huang, 1990**

MATERIAL EXAMINED. China: Xinjiang, Gongliu County, Damoke Town, Wild Fruit Forest in Mountain Woodland, H: 1364 m, 4.VII.2016, 1 ♂, coll. Q. Li; Xinyuan County, Aleemale Town, Wild Fruit Forest at the Improvement Farm, H: 1406 m, 5.VII.2016, 1 ♂, coll. Q. Li.

DISTRIBUTION. Russia (Far East), China (Xinjiang, Liaoning, Beijing, Hebei, Shandong, Hunan, Yunnan).

BIOLOGY. Unknown.

******Sphegigaster intersita* Graham, 1969**

MATERIAL EXAMINED. China: Xinjiang, Chihanger Village, X789, Daur Ethnic Town of Axir, 46°51'54.97"N, 83°8'22.62"E, H: 729 m, 22.VI.2022, 1 ♀, coll. Q. Li.

DISTRIBUTION. Europe, Russia (European part, Far East), Kazakhstan, China (Xinjiang, Beijing, Shandong), Korean Peninsula.

BIOLOGY. Primary parasitoid of dipterans of the family Agromyzidae.

******Sphegigaster pulchra* Huang, 1990**

MATERIAL EXAMINED. China: Xinjiang, Fuyun County, Kizilsu Town, S 226, Weeds near Koksus Lake, 47°1'13.46"N, 89°45'30.45"E, H: 1295 m, 22.VI.2021, 1 ♀, coll. Q. Li; Artux City, Azak Town, Alfalfa field weeds near Taktinang Interchange of Turpan-Hotan Expressway, 39°38'43.31"N, 75°58'19.57"E, H: 1477 m, 28.VII.2022, 1 ♀ coll. Q. Li.

DISTRIBUTION. China (Xinjiang, Sichuan).

BIOLOGY. Unknown.

******Sphegigaster truncatus* Thomson, 1878**

MATERIAL EXAMINED. China: Xinjiang, Fuyun County, Ku'erqisi Town, Weeds in the woods 150 meters north of Fuxing Road, 46°58'51.57"N, 89°31'27.23"E, H: 850 m, 10.VII.2020, 1 ♂, coll. Q. Li; Tacheng City, Ergong Town, Huancheng Road, Weeds under the *Elaeagnus angustifolia* forest, 46°44'40.74"N, 80°0'26.96"E, H: 1109 m, 21.VI.2022, 1 ♂, coll. Q. Li; Tuoli County, Duolate Town, Weeds under trees in the Parkli Ecological Park along S318, 46°3'5.52"N, 85°45'11.42"E, H: 845 m, 21.VI.2022, 1 ♂, coll. Q. Li.

DISTRIBUTION. Europe, Russia (European part, Far East), Iran, Kazakhstan, China (Xinjiang, Liaoning, Ningxia, Yunnan).

BIOLOGY. Primary parasitoid of *Melanagromyza albocilia* Hendel, 1931 (Diptera, Agromyzidae).

******Sphegigaster venusta* Huang, 1990**

MATERIAL EXAMINED. China: Xinjiang, Qinghe County, Aral Town, Weeds by the Daqing River Bridge, 50m east of S228, 46°41'31.40"N, 90°20'50.15"E, H: 1240 m, 9.VII.2020, 1 ♀, coll. Q. Li; Qinghe County, Aral Town, Pastureland at Xingfu Village, S240, 46°37'43.69"N, 90°19'57.86"E, H: 1197 m, 22.VI.2021, 1 ♀, coll. Q. Li.

DISTRIBUTION. China (Xinjiang, Henan).

BIOLOGY. Primary parasitoid of Diptera.

******Sphegigaster yunnanensis* Özdikmen, 2011**

MATERIAL EXAMINED. China: Xinjiang, Aksu City, Yiganqi Township, Road 045, Apple Orchard at Nongjiayuan, Malaise trap, 41°10'58.89"N, 80°8'38.05"E, H: 1069 m, 16–31.VII.2024, 1 ♀, coll. Q. Li.

DISTRIBUTION. China (Xinjiang, Yunnan).

BIOLOGY. Unknown.

DISCUSSION

This study significantly increases our knowledge of the fauna and distribution of Misco-gasterinae parasitoids in the territory of Eastern Palearctic, China and especially Xinjiang Province. *Halticoptera smaragdina* (Curtis) has been recorded in the fauna of the Eastern Palearctic for the first time, as have *H. rasnitsyni* (Dzhanokmen) and *S. glabrata* Graham in China and *H. hippeus* (Walker), *S. cirrhocornis* Huang, *S. fusca* Huang, *S. hypocyrta* Huang, *S. intersita* Graham, *S. pulchra* 1990, *S. truncatus* Thomson, *S. venusta* Huang and *S. yunnanensis* Özdikmen in Xinjiang Province.

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REFERENCES

- Burks, R., Mitroiu, M.-D., Fusu, L., Heraty, J.M., Janšta, P., Heydon, S., Dale-Skey Papilloud, N., Peters, R.S., Tselikh, E.V., Woolley, J.B., Noort, S., Baur, H. & Cruaud, A. 2022. From hell's heart I stab at thee! A determined approach towards a monophyletic Pteromalidae and reclassification of Chalcidoidea (Hymenoptera). *Journal of Hymenoptera Research*, 94: 13–88. DOI: 10.3897/jhr.94.94263
- Huang, D.W. & Xiao, H. 2005. Hymenoptera Pteromalidae. *Fauna Sinica, Insecta*, 42: 1–382.
- Tselikh, E.V. 2019. 38. Family Pteromalidae. P. 83–111. In: Belokobylskij, S.A., Samartsev, K.G., Il'inskaya, A.S. (Eds.), *Annotated catalogue of the Hymenoptera of Russia. Volume II. Apocrita: Parasitica*. Zoological Institute RAS, St Petersburg. DOI: 10.31610/trudyzin/2019.supl.8.5
- UCD Community. 2025. Universal Chalcidoidea Database (UCD) curated in TaxonWorks. 1143. Available at: <https://sfg.taxonworks.org/api/v1/> (Accessed on 13 June 2025)