

МИНИСТЕРСТВО ОБРАЗОВАНИЯ
РОССИЙСКОЙ ФЕДЕРАЦИИ

Благовещенский государственный
педагогический университет

ЭКОЛОГИЧЕСКИЙ ЦЕНТР
КАФЕДРА ЗООЛОГИИ

**Животный мир
Дальнего Востока**

Сборник научных трудов

Выпуск 4

БЛАГОВЕЩЕНСК 2002

УДК 591.9 (571.6)
ББК 28.6 (255)
Ж 67

Печатается по решению редакционно-издательского совета Благовещенского государственного педагогического университета

Животный мир Дальнего Востока: Сборник научных трудов /Под общ. ред. А. Н. Стрельцова. Благовещенск: Изд-во БГПУ, 2002. Выпуск 4. 220 с.

Представлены материалы по фауне, систематике, морфологии и экологии животных Дальнего Востока, по проблемам использования ресурсов животного мира, мониторинга состояния фауны и ее охраны.

Сборник предназначен для биологов, экологов, специалистов сельского и лесного хозяйства, аспирантов и студентов специальностей естественнонаучного цикла.

Редакционная коллегия:
А. Н. Стрельцов, доц. кафедры зоологии БГПУ, к. б. н.
(ст. ред.);
Е. И. Маликова, доц. кафедры зоологии БГПУ, к. б. н.;
И. М. Черемкин, доц. кафедры зоологии БГПУ, к. б. н.

ISBN 5-8331-0049-6

©Благовещенский государственный
педагогический университет, 2002



УДК 595.798

© 2002 г.

**NEW DATA ON DISTRIBUTION OF SOCIAL WASPS
(HYMENOPTERA, VESPIDAE: POLISTINAE, VESPINAE) IN THE
ASIAN RUSSIA AND NORTH CHINA**

Dubatolov V. V. *, Streltzov A. N. **, Malikova E. I. **

[Дубатолов В. В., Стрельцов А. Н., Маликова Е. И. Новые данные по распространению общественных складчатокрылых ос (*Hymenoptera, Vespidae: Polistinae, Vespinae*) Азиатской России и Северного Китая.]

*Siberian Zoological Museum, Institute of Animal Systematics and Ecology, Frunze street, 11, Novosibirsk, 630091, Russia

*Сибирский зоологический музей Института систематики и экологии животных СО РАН, ул. Фрунзе, 11, Новосибирск, 630091, Россия

**Department of Zoology, Blagoveshchensk State Pedagogical University, Lenin street, 104, Blagoveshchensk, 675000, Russia

**Кафедра зоологии, Благовещенский государственный педагогический университет, ул. Ленина, 104, Благовещенск, 675000, Россия

Основываясь на материалах, собранных сотрудниками Сибирского зоологического музея Института систематики и экологии животных СО РАН (Новосибирск), а также А. Н. Стрельцовым и Е. И. Маликовой (Благовещенский педагогический университет), получены новые данные по распространению общественных складчатокрылых ос подсемейства *Vespinae* в Азиатской России и Северном Китае. Впервые для территории Азиатской России указывается представитель видовой группы *Polistes gallicus*. Пять видов - *Polistes nimpha*, *Vespa ducalis*, *Vespula koreensis*, *V. flavescens* и *V. Shidai* - впервые собраны в Амурской области, два вида - *Vespa simillima* и *Polistes chinensis* - на Амурско-Зейской равнине, что представляет собой самые западные находления этих видов в России; *Dolichovespula omissa* впервые обнаружена в Центральной Сибири - в Хакасии. *Vespa bicolor*, найденная в окрестностях Пекина, впервые указывается для территории Палеарктики.

Studies of geographical distribution of the common wasps in the Asian Russia began only in 90-th. Due to the works of N. Kurzenko [1992, 1995], their species composition and distribution have been revealed in the Russian Far East southern part and, partly, in East Siberia. After examination of the collection of the Siberian Zoological Museum of the Institute of Animal Systematics and Ecology, distribution of the common wasps in the main



part of Siberia was outlined [Dubatolov, 1998]. In the last years a considerable materials on the common wasps was collected in the Amurskaya province, some species were collected here at the first time. This material allow to shift the known north-western borders of the ranges for five Far Eastern species. *Vespa bicolor* was collected in North China, newly for the Palearctic. Besides, new materials from the Khakas Republic (southern part of Central Siberia) confirmed the occurrence in Siberia of a rare wasp social parasite, *Dolichovespula omissa*.

Polistinae

***Polistes gallicus* Linnaeus, 1767** (=*foederatus* Kohl, 1898; =*omissus* Weyrauch, 1939)

NOTES. Determination of this taxon is only tentative, because it belongs to a complex of species which should be thoroughly revised (A. Ćetković, pers. comm.). According to Ćetković (who is currently revising this complex from the West Palearctic area), the name *gallicus* as applied in the recent literature (i. e. after synonymizations by M. Day [1979] and J. Gusenleitner [1985] actually refers to a group of closely related species. The complex is distributed from NW Africa and South to Central Europe through Mongolia [Giordani Soika, 1970, 1976; Gusenleitner, 1991], but *P. gallicus* s. str. has probably more restricted distribution. In Siberia, this is the first record of *P. gallicus* s. lat., since the specimens listed herewith were formerly misidentified as *Polistes biglumis* L. [see: Dubatolov, 1998], which also occurs in the Altai. Males of this complex differs from the other members of the subgenus *Polistes* (including *P. biglumis*) by having temporal region short and obliquely converging backwards (as seen from the above), narrow oculomalar space and rounded apical margin of the clypeus. However, some females of this complex could be difficult to separate from the females of *P. biglumis*, especially when small specimens are compared (A. Ćetković, pers. comm.). Specimens from the Altai differs from those from Croatia (that were kindly sent by Ozren Polašek) by the structure of the terminal antennal article: in dorsal view it is noticeably elongate with parallel sides in the Croatian specimen, and not so elongate and slightly constricted and widely rounded at the apex in all specimens from the Altai.

MATERIAL. RUSSIA: Altaiskii krai: 1 male, Kolyvan, 5.07.1976 (Bubnova, Korshunov, Zolotarenko leg.); Altai Republic: 1 male, Lake Teletskoe, valley of the Kyga River, 26.08.1961 (Korshunov leg.); 1 male, Chulyshman River, Katu-Yaryk, 11.08.1962 (Novikova leg.); 1 male, Chulyshman River, Chodro, 13.VIII.1962 (Novikova leg.); 1 bilateral hynan-



dromorph specimen, 5 km from Bulukhta River mouth, 27.07.1982 (Artemov leg.).

***Polistes chinensis antennalis* Pérez, 1905**

NOTES. A northern subspecies of the Amurian-Chinese-Japanese species. It was firstly authentically recorded from the Russian territory only by N. V. Kurzenko [1992] from Primorskii Krai, the south part of Khabarovskii krai, and south-eastern regions of the Amurskaya province: 20 km S from Arkhara and 7 km E from Ukrainka. The species turned to be not rare throughout southern districts of the Amurskaya province west to Blagoveshchensk and north to Svobodnyi.

MATERIAL. RUSSIA: Amurskaya province: 3 females, Tambovskii District, 2-5 km E from Korovo, near Lake Krivoe, 4.07.1998 (Dubatolov leg.); 1 female, Blagoveshchensk vicinity, Verkhneblagoveshchenskoe, 15.05.1999 (Dubatolov leg.); 1 male, Blagoveshchensk vicinity, 6-8 km N from Mokhovaya Pad', near Lake Peschanoe, 28.08.1997 (Streltzov leg.); 5 males, 30 km N from Blagoveshchensk, Mukhinka, 3.08-13.09.1999 (Malikova leg.); 1 female, 17 km SSW from Svobodnyi, Malaya Sazanka, 13-15.08.1999 (Malikova leg.).

***Polistes nimpha* (Christ, 1791)**

NOTES. Europe-Siberian species, formerly known from Eastern Siberia, from Southern Buryatia (Kurzenko, 1995), Chita province east to the Argun river (Dubatolov, 1998) and from Yakutsk (Pekkarinen, Gustafsson, 1999). Now it was found in the Amur province, namely from the Blagoveshchensk suburbs.

MATERIAL. RUSSIA: Amurskaya province: 1 male, 30 km N from Blagoveshchensk, 3.08.1999 (Malikova leg.); 1 female, 17 km SSW from Svobodnyi, Malaya Sazanka, 13-15.08.1999 (Malikova, Vanicheva leg.); 3 males, 1 female, Blagoveshchensk suburbs, 3-8 km NE from Mokhovaya Pad', Lake Peschanoe vic., 15.09.2000 (Streltzov leg.).

Vespinae

***Vespa* (*Vespa*) *ducalis* Smith, 1852**

NOTES. This species is widely distributed from the Russian Far East south to Indo-China. Not far ago it was separated from *V. tropica* Linnaeus, 1758 by M. Archer [1991]. *V. ducalis* was formerly known in Russia as "*V. tropica*" only from the Southern Primorye territory [Kurzenko, 1995], now it was found also in the Amur basin, in the Small Khingan Mts., namely, in Kundur, south-eastern part of the Amurskaya province. Taking into account large materials on the common wasps from the Amurskaya province, this species does not occur west from the Bureya River.



MATERIAL. RUSSIA: Amurskaya province: 1 worker, Kundur (student materials); 1 female, the same locality, 10.06.1999 (Streltzov leg.).

***Vespa (Vespa) simillima* Smith, 1868**

NOTES. Inhabits East Asia from Kamchatka and Southern Kuriles to the Amurskaya Province, NE China, Korea and Japan [Kurzenko, 1995]. The westernmost locality of the species was recorded from the eastern regions of the Amurskaya province, namely, Small Khingan Mts. near Kundur [Kurzenko, 1992]. Now it was collected near Blagoveshchensk, 250 km to the west from the formerly known westernmost locality.

MATERIAL. RUSSIA: Amurskaya province: 1 worker, Blagoveshchensk vicinity, 1997 (student materials).

***Vespa (Vespa) bicolor* (Fabricius, 1787)**

NOTES. An oriental species, formerly known from East India (Uttar Pradesh, West Bengal, Sikkim, Assam, Meghalaya), Nepal, Bhutan, Indo-China, and Central and Southern China: Sichuan, Yunnan, Guangxi, Jiangxi, Fujian, Xianggang [Archer, 1989; site of J. Kojima: <http://www.sci.ibaraki.ac.jp/~jkrtw/wasp/vespinae/Vespa.html>]. Herewith it is recorded from the Palearctic China, namely the Beijing District. The specimen was determined with a kind help by Seiki Yamane (Japan). Formerly it was recorded from the Beijing Region by R. du Buysson [1905] also, but this record was forgotten later.

MATERIAL. CHINA: 1 worker, Beijing District, Xia long men, 20.06.2000 (Barkalov leg.).

***Vespula (Rugovespula) koreensis* (Radoszkowski, 1887)**

NOTES. An oriental species, also formerly known in Russia only from the southern part of the Primorskii krai [Kurzenko, 1995] and the Khabarovsk suburbs [Gussakovskii, 1932]. It is not rare in southern regions of the Amurskaya province.

MATERIAL. RUSSIA: Amurskaya province: 1 female, 5-7 km N from Belogorye, near camp Mukhinka, end 04 – beginning 05.1998 (Malikova leg.); 1 worker, Blagoveshchensk, Verkhneblagoveshchenskoe, 17.07.1998 (Dubatolov leg.); 1 worker, the same locality, 09-10.1998 (Streltzov leg.); 2 females, the same locality, 28, 29.05.1999 (Dubatolov leg.).

***Vespula (Paravespula) flaviceps* (Smith in Horne et Smith, 1870)**

NOTES. An oriental species, formerly known in Russia from the southern part of the Primorskii krai [Kurzenko, 1995]. A rare species near Blagoveshchensk in the Amurskaya province.

MATERIAL. RUSSIA: Amurskaya province: 2 females, Blagoveshchensk, Verkhneblagoveshchenskoe, 7, 12.07.1998 (Dubatolov leg.).



***Vespa (Paravespula) shidai* Ishikawa, Sk.Yamane et Wagner, 1980**

NOTES. A Manchurian-Japanese species, formerly known from the southern part of the Russian Primorskii Krai Province, South Kurile Islands (Kunashir), Japan, Korea, and North-East China [Kurzenko, 1995]. It was collected by P. V. Rudoiskatel' in the south-east part of the Amurskaya Province; in the Zoological Institute (St.-Petersburg, Russia) collection there is a specimen from Khabarovsk (03.06.1916, Pavlenko leg.).

MATERIAL. RUSSIA: Amurskaya province: 2 workers, Bureya region, near settlement Talakan, river Sine'l flood plain, 20.08.2001 (Rudoiskatel' leg.).

***Dolichovespula omissa* (Bischoff, 1931)**

NOTES. Formerly was known mainly from Europe, including European Russia [Tobias, 1978]. Few years ago the species was collected also in the Altai mountains just on the border between Russia and Kazakhstan, on the Katunskii Range [Dubatolov, 1998]. In 1998 it was collected by V. K. Zintshenko more easterly in Siberia, namely, in Khakasia. This species is a nest parasite of *D. sylvestris* (Scop.) [Tobias, 1978].

MATERIAL. RUSSIA: Khakasia: 1 female, Shira District, Malaya Syya, 16.07.1998 (Zintshenko leg.).

Acknowledgements

Authors are very grateful to all the colleagues who contributed to the materials mentioned in this paper: to P. V. Rudoiskatel' (Ekaterinburg), Dr. I. A. Artemov, Dr. A. V. Barkalov, V. K. Zintshenko (Novosibirsk); to Dr. A. Ćetković (Belgrad, Yugoslavia) and Dr. O. Pojašek (Virovitica, Croatia) for useful information on systematics of *Polistes gallicus*-species group, to Dr. J. Kojima (Mito, Japan) for help with literature, to Dr. S. Yamane (Japan) for help with determination of the Chinese *Vespa*, and to Dr. O. E. Kosterin (Novosibirsk) for correcting the language of the paper.

REFERENCES

Archer M. E. A key to the world species of the Vespinae (Hymenoptera) // Res. monograph of the College of Ripon and York St. John, 1989. – No 2, part 1: Keys, checklist and distribution. 41 p.; part 2: Figures. 34 p.

Archer M. E. Taxonomy and bionomics of the *Vespa tropica* group (Hym., Vespidae) // Entomologist's Monthly Magazine, 1991. Vol. 127. P. 225-232.



Buysson R. du. Monographie des guêpes du *Vespa* // Annales de la Société Entomologique de France, 1904. Vol. 72. P. 260-288, pl. 3-4; 1905. Vol. 73. P. 485-634, pl. 5-15.

Day M. C. The species of Hymenoptera described by Linnaeus in the genera *Sphex*, *Chrysis*, *Vespa*, *Apis* and *Mutilla* // Biol. J. Linn. Soc., 1979. Vol. 12. P. 45-84.

Dubatolov V. V. Social wasps (*Hymenoptera*, *Vespidae*: *Polistinae*, *Vespinae*) of Siberia in the collection of Siberian Zoological Museum // Far Eastern Entomologist, 1998. – No. 57. – P. 1-11.

Giordani Soika A. Ergebnisse der zoologischen Forschungen von Dr. Z. Kaszab in der Mongolei. 223. *Vespidae* und *Eumenidae* (*Hymenoptera*) // Ann. Hist.-Nat. Mus. Natn. Hung., 1970. Bd. 62. S. 325-333.

Giordani Soika A. Vespidi et Eumenidi (*Hymenoptera*) raccolti in Mongolia dal Dr. Z. Kaszab // Acta Zool. Acad. Sci. Hung., 1976. Vol. 22, No. 3-4. P. 271-276.

Gusenleitner J. Bemerkenswertes über Faltenwespen VIII (*Hymenoptera*, *Vespidae*) // Nachr. Bayer. Ent., 1985. Bd. 34, No. 4. S. 105-110.

Gusenleitner J. Über *Vespoidea* (*Hymenoptera*) aus der Mongolei und der Sovietunion. Ergebnisse der Mongolisch-Deutschen Biologischen Expeditionen seit 1962, Nr. 193 // Linzer biol. Beitr., 1991. Bd. 23, No. 2. S. 631-641.

Gussakovskii V. Verzeichnis der von Herrn Dr. R. Malaise im Ussuri und Kamtschatka gesammelten aculeaten Hymenopteren // Arkiv f. Zool. Bd. 24A. S. 1-66.

Kurzenko N. V. [Fam. *Vespidae*]. In: Nasekomye Khinganskogo zapovednika. Part 2. Vladivostok: Dal'nauka, 1992. P. 251-254 (in Russian).

Kurzenko N. V. [Superfamily *Vespoidea*. 65. Family *Vespidae* – hornets]. In: Opredelitel' nasekomykh Dal'nego Vostoka Rossii. T. IV. Setchatskotkryloobraznye, skorpionitsy, pereponchatokrylye. P. 1. St-Petersburg: Nauka, 1995. P. 264-324 (in Russian).

Pekkarinen A., Gustavsson, B. The *Polistes* species in northern Europe (*Hymenoptera*: *Vespidae*) // Entomol. Fennica, 1999. Vol. 10. P. 191-197.

Tobias V. I. [Superfamily *Vespoidea* – hornets. 1. Family *Vespidae*]. In: Opredelitel' nasekomykh evropeiskoi chasti SSSR. T. III. Pereponchatokrylye. P. 1. Leningrad: Nauka, 1978. P. 147-152 (in Russian).