

Two New Species of the Genus *Alopecosa* Simon (Araneae: Lycosidae) from Inner Mongolia, China

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Jun Chen, Da-Xiang Song and Jiu-Chun Gao (2000) Two new species of the genus *Alopecosa* Simon (Araneae: Lycosidae) from Inner Mongolia, China. *Zoological Studies* 39(2): 133-137. Two new species of the genus *Alopecosa* Simon from Inner Mongolia, China, are described: *A. huabanna* sp. nov. and *A. ovalis* sp. nov. Both are similar to *A. hokkaidensis* Tanaka and *A. moriutii* Tanaka known from Japan as well as *A. hingganica* Tang, Urita and Song from Inner Mongolia and the northern Holarctic *A. pictilis* (Emerton) in general outlines of the median apophysis and the median septum. *A. huabanna* can be distinguished by the specific dorsal band on the abdomen and the dense long hairs on the male metatarsus+tarsi I and II, as well as by the structures of the epigyne and palpal organ; and *A. ovalis* by the dorsal pattern of the abdomen, the sparse lateral long erect hairs on the male metatarsus+tarsi I and II, the structures of the epigyne and palpal organ, and the erect long strong hairs on the cymbium.

Key words: New species, *Alopecosa*, Lycosidae, Inner Mongolia.

The genus *Alopecosa* Simon (syn. *Tarentula* Sundevall) occurs in the Palearctic and Nearctic Regions. McKay (1973) listed 3 Australian species of this genus: *A. funesta* (C. L. Koch, 1837), *A. leonhardi* (Strand, 1913), and *A. madigani* (Hickman, 1944), but no further descriptions or discussions of them were given in a series of his papers which followed. There are hardly any *Alopecosa* species known from the Ethiopian Region (Dippenaar-Schoeman and Jocqué 1997). So far, a total of more than 100 species of this genus have been described in the world. The species of this genus are usually arranged into several groups based on the external genitalia. For example, Lugetti and Tongiorgi (1969) divided 25 species and 2 subspecies from Europe into 5 groups, Fuhn and Niculescu-Burlacu (1971) divided 16 of 18 species from Romania into 4 groups, and Dondale and Redner (1979) divided 7 North American species into 3 groups.

Simon first reported the species of *Alopecosa* from China. In 1880, he described *Lycosa erudita*

Simon, 1880 (= *Alopecosa albostrata* (Grube, 1861)) based on specimens collected from Beijing. Saito (1936) described the species *Tarentula hsinglungshanensis* and an innominate species, *T.* sp., the former now being a synonym of *Lycosa sinensis* Schenkel, 1953. Schenkel (1936, 1953, 1963) described 37 Chinese species and subspecies, most of them (29 species and subspecies) in 1963. In 1986, D. X. Song examined Schenkel's type specimens deposited in the National Museum of Natural History in Paris and incorporated 33 species of Schenkel's into 11 species based on a comparison of their epigynes or palpal organs. In addition to this important revision, successive taxonomic studies on Chinese species of the genus *Alopecosa* have been made by the following authors: Li and Chen (1982), Song (1982), Zhang and Zhu (1982), Song and Hubert (1983), Hu and Li (1987a, b), Yu and Song (1988a, b), Hu and Wu (1989), Qiu and Wang (1990a, b, 1992), Tang, Urita, and Song (1993), Peng et al. (1997), Yin et al. (1997), Tang, Yin, and

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Yang (1998), Song, Zhu, and Chen (1999). Now, there are about 30 species of this genus recognized from China.

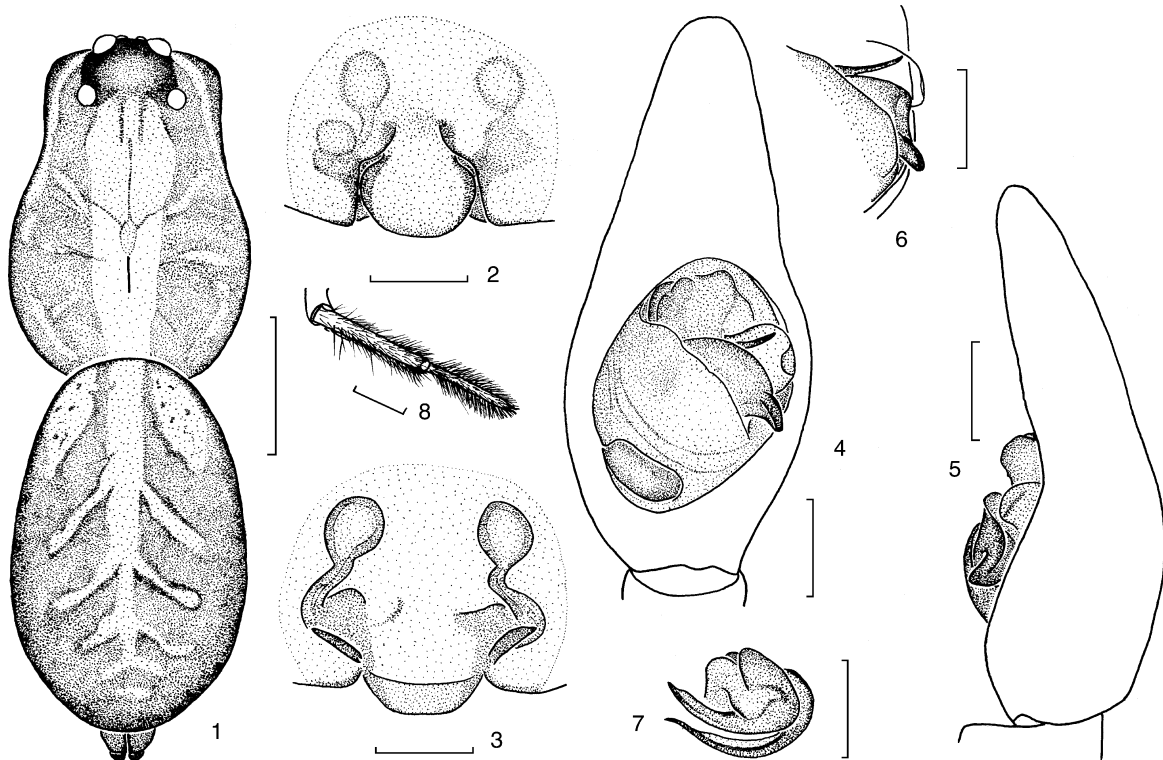
The species *Tarentula* sp., described by Saito (1936) is the 1st record of *Alopecosa* from Inner Mongolia. Schenkel (1963) described 5 species and 1 subspecies of *Alopecosa* occurring in this area: *Tarentula potanini* Schenkel, 1963 (= *Alopecosa sibirica* (Kulczynski, 1908)), *T. hamata* Schenkel, 1963 (= *A. hamata* (Schenkel, 1963)), *T. argenteopilosa* Schenkel, 1963 (= *A. auripilosa* (Schenkel, 1953)), *T. cinnameopilosa* Schenkel, 1963 (= *A. cinnameopilosa* (Schenkel, 1963)), *T. fenestrata* Schenkel, 1963 (= *A. licenti* (Schenkel, 1953)), and *T. fenestrata pseudobarbipes* Schenkel, 1963 (= *A. licenti* (Schenkel, 1953)). Tang, Urita, and Song (1993) described 2 new species, and Peng et al. (1997) 1 new species of this genus from Inner Mongolia: *Alopecosa curtohirta* Tang, Urita and Song, *A. hingganica* Tang, Urita and Song, and *A. xilinensis* Peng et al. Zhu listed the species described by Saito and Schenkel in his *A list of Chinese spiders* in 1983 without discussing the problem of synonym.

While examining specimens of wolf spiders collected from Inner Mongolia, China, we came across 2 species similar to *A. hokkaidensis* Tanaka, 1985 and *A. moriutii* Tanaka, 1985, both known from Japan, as well as *A. hingganica* Tang, Urita and Song, 1993 from Inner Mongolia and the northern Holarctic *A. pictilis* (Emerton, 1885) in general outlines of the median apophysis and median septum, especially to the 2 Japanese species. After comparison with specimens of these 2 Japanese species identified by Dr. H. Tanaka, the 2 species from Inner Mongolia are considered to be new to science, and their descriptions are given below. Type specimens are deposited at the Institute of Zoology, Chinese Academy of Sciences, Beijing. All measurements are given in millimeters (mm). Abbreviations used in this paper are as follows: ALE, anterior lateral eye(s); and AME, anterior median eye(s).

***Alopecosa huabanna* sp. nov.**

(Figs. 1-8)

Types: holotype: ♀, Laotoushan Mt. (45.9°N, 120.9°E), Inner Mongolia Autonomous Region, 21-25



Figs. 1-8. *Alopecosa huabanna* sp. nov. 1, female body (dorsal view); 2-3, epigyne (2, ventral view; 3, dorsal view); 4-6, left palp of male (4, ventral view; 5, retrolateral view; 6, prolateroventral view, part); 7, terminal part of right palpal organ (ventral view); 8, right metatarsus+tarsus I of male (dorsal view).

Scale bars: Fig. 1 = 2 mm; Figs. 2-7 = 0.2 mm; Fig. 8 = 1 mm.

May 1972; paratypes: 3 ♂♂, same data as holotype.

Description: Female: Total length 9.63: carapace 4.69 long, 3.44 wide; abdomen 5.19 long, 3.44 wide. Carapace with a wide, distinct yellowish-brown median band, its margins almost straight in posterior part; radiating stripes indistinct; lateral bands indistinct and broken. Anterior eye row slightly procurved, AME equal in size to ALE, AME-AME as long as AME-ALE. Clypeus about 1.5 times the diameter of AME. Chelicerae with 3 teeth on promargin, 2 on retromargin. Sternum brown, with white pubescence. Legs yellowish brown, with longitudinal brown bands. Leg measurements: I 11.01 (3.13, 1.31, 2.38, 2.25, 1.94); II 10.50 (3.06, 1.19, 2.25, 2.25, 1.75); III 10.44 (2.81, 1.13, 2.06, 2.69, 1.75); IV 14.50 (3.75, 1.31, 3.13, 4.06, 2.25). Dorsum of abdomen dark brown, with a longitudinal median yellowish band bearing 4 pairs of symmetric branches in the posterior half, and with a yellowish-brown longitudinal band on each side at base of band. Epigyne without hood; anterior part of median septum wide and short, posterior part expanded, tongue-shaped, copulatory tubes slightly twisted, spermathecae rounded, large.

Male: Total length 7.88-8.19. One paratype: total length: 7.88: carapace 4.25 long, 3.06 wide; abdomen 3.88 long, 2.69 wide. Similar to female in gen-

eral shape and color, but body darker; ventral sides of metatarsus+tarsi I and II with long lateral hairs. Leg measurements: I 10.69 (2.81, 1.13, 2.50, 2.50, 1.75); II 10.26 (2.69, 1.13, 2.25, 2.50, 1.69); III 9.88 (2.50, 0.94, 1.94, 2.75, 1.75); IV 13.89 (3.44, 1.25, 2.88, 4.13, 2.19). Cymbium without apical claw but with several strong setae at tip. Median apophysis like a transverse plate, tip narrowed, downcurved; embolus with semitransparent laminar extension along 3/4 of concave side, distally narrow; terminal apophysis sickle-shaped, distally with slight incision.

Etymology: The specific name is derived from the Chinese phonetic alphabet and refers to the dorsal abdominal band pattern.

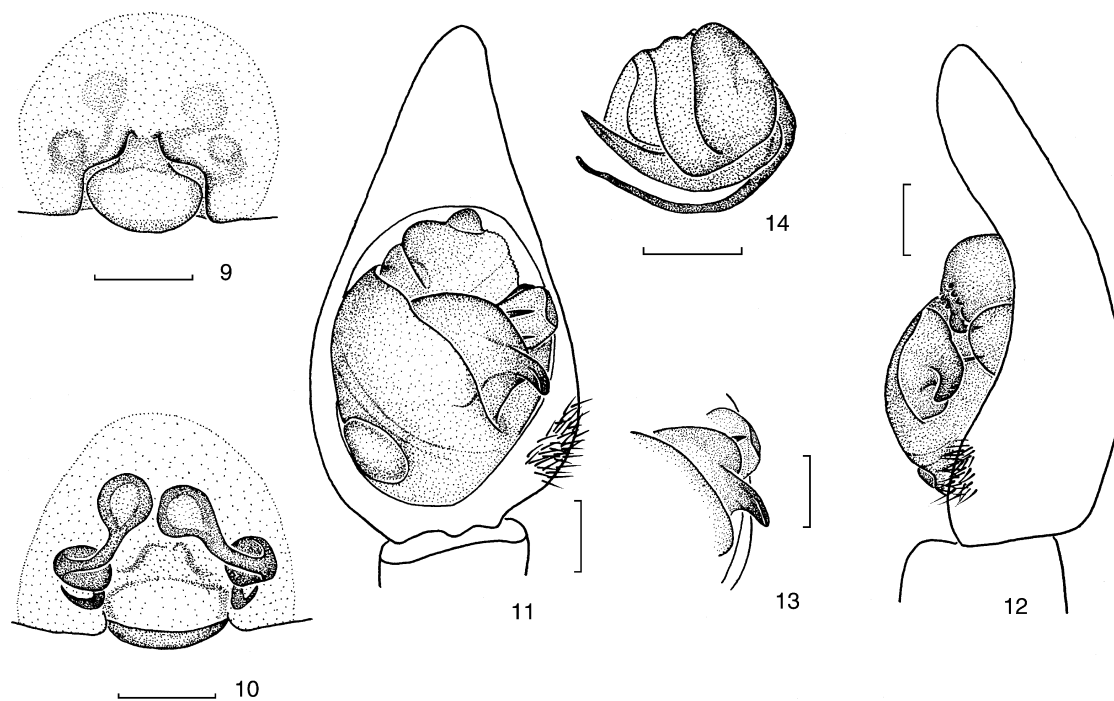
Diagnosis: This species is similar to *A. hokkaidensis* Tanaka, *A. moriutii* Tanaka, *A. pictilis* (Emerton), and *A. hingganica* Tang, Urita and Song, but can be distinguished from them by the specific dorsal band of the abdomen and the long hairs of the male metatarsus+tarsi I and II, as well as the shapes of the epigyne and palpal organ.

Distribution: Inner Mongolia, China.

***Alopecosa ovalis* sp. nov.**

(Figs. 9-14)

Types: holotype: ♀, Laotoushan Mt. (45.9°N,



Figs. 9-14. *Alopecosa ovalis* sp. nov. 9-10, epigyne (9, ventral view; 10, dorsal view); 11-13, left palp of male (11, ventral view; 12, retrolateral view; 13, prolateroventral view, part.); 14, terminal part of right palpal organ (ventral view). Scale bars: Figs. 9-14 = 0.2 mm.

120.9°E), Inner Mongolia Autonomous Region, 21-25 May 1972; paratypes: 1 ♀ 4 ♂ ♂, same data as holotype.

Description: Female: Total length 8.44-9.19. Holotype: total length 8.44: carapace 4.44 long, 3.50 wide; abdomen 4.25 long, 3.19 wide. Carapace with a wide, distinct reddish-brown median band, its margins almost straight in posterior part, narrowed behind fovea; radiating stripes distinct; lateral bands obscure. Anterior eye row slightly procurved, AME slightly larger than ALE, AME-AME almost the same length as AME-ALE. Clypeus about 1.5 times the diameter of AME. Chelicerae with 3 teeth on pro-marginal and 2 on retromarginal. Sternum brown, with white pubescence. Legs with traces of annulation. Leg measurements: I 9.87 (2.81, 1.31, 2.19, 2.06, 1.50); II 9.38 (2.81, 1.13, 1.94, 2.06, 1.44); III 9.26 (2.69, 0.94, 1.88, 2.44, 1.31); IV 13.56 (3.56, 1.25, 2.88, 4.06, 1.81). Dorsum of abdomen with a yellowish-brown longitudinal band, cardiac pattern pale brown. Epigyne without hood; anterior part of median septum wide and short, posterior part extended, oval-shaped; copulatory tubes thin, twisted, spermathecae rounded, large.

Male: Total length 7.69-7.94. One paratype: total length 7.94, carapace 4.19 long, 3.13 wide; abdomen 4.00 long, 2.63 wide. General shape and color essentially as in female, but body with denser pubescence; annulation of legs almost invisible, ventral sides of metatarsus+tarsi I and II with sparse long lateral hairs. Leg measurements: I 10.57 (2.81, 1.13, 2.44, 2.56, 1.63); II 10.07 (2.69, 1.19, 2.19, 2.44, 1.56); III 9.81 (2.94, 0.69, 2.06, 2.56, 1.56); IV 13.25 (3.38, 1.06, 2.75, 4.25, 1.81). Palp yellowish brown, femur with short erect hairs on retrolateral surface, tarsus with long erect strong hairs on posterior part of retrolateral surface; cymbium without apical claw but with several strong setae. Median apophysis transversely plate-shaped, tapering distally, tip downcurved, embolus thin and long, terminal apophysis broad, sickle-shaped.

Etymology: The specific name refers to the shape of the median septum of the epigyne.

Diagnosis: This species is similar to *A. pictilis* (Emerton), *A. hokkaidensis* Tanaka, *A. moriutii* Tanaka, *A. hingganica* Tang, Urita and Song, and *A. huabanna* sp. nov., but differs from them in the dorsal pattern of the abdomen, the sparse long erect lateral hairs of the metatarsus+tarsi I and II, the shapes of the epigyne and palpal organ, and the cymbium with strong, long, erect hairs.

Distribution: Inner Mongolia, China.

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內蒙古舞蛛屬兩新種記述(蜘蛛目：狼蛛科)

陳 軍¹ 宋大祥² 高久春³

本文記述內蒙古舞蛛屬 *Alopecosa* 兩新種：花斑舞蛛 *A. huabanna* sp. nov. 和橢圓舞蛛 *A. ovalis* sp. nov.。花斑舞蛛 *A. huabanna* 近似於 *A. hokkaidensis* Tanaka, 1985、*A. moriutii* Tanaka, 1985、*A. pictilis* (Emerton, 1885) 和 *A. hingganica* Tang, Urita and Song, 1993，但該種以其腹部背面獨特的斑紋及雄蛛第一、二步足跗節和基跗節腹面兩側的長毛可容易地與其它種區別。另外，該種的外雌器和觸肢器的形狀與近似種亦不同。橢圓舞蛛 *A. ovalis* 近似於 *A. pictilis* (Emerton)、*A. hokkaidensis* Tanaka、*A. moriutii* Tanaka 和 *A. hingganica* Tang, Urita and Song, 1993，與這些近似種的區別在於腹部背面的斑紋不同，雄蛛第一、二步足跗節和基跗節腹面兩側具稀疏的直立長毛，雄蛛觸肢跗節基半部外側具一叢粗大的直立剛毛，以及外雌器和觸肢器的形狀與近似種不同。模式標本均保存在中國科學院動物研究所。

關鍵詞：新種，舞蛛屬，狼蛛科，內蒙古。

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