

Two New Genera of the Family Gnaphosidae (Arachnida: Araneae) from China^{*}

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Abstract Two new genera of the Family Gnaphosidae are given: *Allozelotes* and *Coillina* including two type species i. e. *A. lushan* and *C. baka*, and one new species *A. dianchi*. Type specimens are deposited in the Department of Biology, Hunan Normal University. The measurement unit is mm.

Key words Gnaphosidae, new genera, new species

中国平腹蛛科两新属(蛛形纲:蜘蛛目)

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摘要 本文记述了平腹蛛科两个新属及隶属于其中的3新种: 异狂蛛属, 新属 *Allozelotes* gen. nov., 庐山异狂蛛, 新种 *A. lushan* sp. nov., 滇池异狂蛛, 新种 *A. dianchi* sp. nov.; 卷蛛属, 新属 *Coillina* gen. nov., 巴卡卷蛛, 新种 *Coillina baka* sp. nov.. 所有模式标本均保存在湖南师范大学生物学系。

1 异狂蛛属, 新属 *Allozelotes* gen. nov. (图1~9)

模式种: 庐山异狂蛛, 新种 *Allozelotes lushan* sp. nov.

鉴别特征: 本新属蜘蛛第 一、后附节远端具有梳理器(preening comb) (图6) 与狂蛛属(*zelotes*) 相似, 但其雄性触肢器缺乏中间骨片(intercary sclerite). 本属的以下特征可与狂蛛类(*zelotines*) 加以区别: a) 插入器的远端由生殖球的后侧面向前侧面弯曲, 形成一虹形结构(图2, EMB); 插入器基部骨片呈半环形(图2, EB); 1刺位于后侧胫节突上(图2, MS, RTA); b) 外雌器有1大的交媾腔(图9, A) 和1对圆形交媾囊(图9, CS). 本新属还可与中国已有的狂蛛类相区别: 顶突不分叉以与近狂蛛属 *Drassyllus* 相区别; 螯肢前中面上没有成簇的硬毛以与粗狂蛛属 *Trachyzelotes* 相区别; 顶突远端不尖而圆钝以与尾狂蛛属 *Urozelotes*

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相区别。再者与分布于国外的几个属也不相同，与 *Camillna* 不同点是本属前中眼小且不相邻接；与 *Setaphis* 不同点是本属具有不同弯曲状的插入器和外雌器管道。

1. 1 庐山异狂蛛, 新种 *Allozelotes lushan* sp. nov. (图1~9)

正模♂, 副模12, 江西庐山(29°30'N, 115°54'E), 1987-06-17, 王家福采; 1, 湖南绥宁, 1996-05-28; 1, 湖南衡阳岫嵛峰1997-08-02, 尹长民, 颜亨梅采。

鉴别特征: 本新种具有, 后附节梳理器与狂蛛属种类相似, 但由于具有以下特征可与狂蛛属区别: 插入器远端呈虹形弯曲, 基部骨片为半环状, 雄蛛胫节后侧面有1根大刚毛(刺); 外雌器有一大的交媾腔和一对圆形交媾囊。

1. 2 滇池异狂蛛, 新种 *Allozelotes dianchi* sp. nov. (图10~16)

正模♂, 副模1, (云南滇池(24°54'N, 102°42'E), 1983-05-04, 汪海珍采。

鉴别特征: 本新种与庐山异狂蛛 *A. lushan* 相似, 但有以下不同点: a) 雄蛛触肢器, 后侧观, 插入器基部骨片一端大且呈梯形(图11, EB) 而后者较小且呈长方形(图2); 本种中突较短而厚, 胫节后侧突上的大刚毛较大; b) 纳精囊椭圆形, 直立, 后者圆形, 平置; c) 连结管较短而粗。

2 卷蛛属, 新属 *Coillina* gen. nov.

模式种: 巴卡卷蛛, 新种 *Coillina baka* sp. nov.

鉴别特征: 本新属蜘蛛以其插入器独特的卷曲; 不具备第、后附节梳理器和螯肢的后侧缘没有脊突(keel)和膜片(lamina), 可与其他平腹蛛类区别开来。和平腹蛛科中插入器卷曲者也不相同, 例如 *Apodrassodes*, *Apophyllus* 和 *Fedotovia*, 它们的插入器都没有伸入生殖球背侧的附舟的腔窝(alveolus)内, 更有甚者本属插入器的起始处与 *Apodrassodes* 也不同。

2. 1 巴卡卷蛛, 新种(*Coillina baka* sp. nov.)(图17~25)

正模♂, 副模1♂, 云南勐伦(20°03'N, 100°03'E) 巴卡, 海拔1020M, 1997-11-24, 颜亨梅采。

鉴别特征: 以其独特的插入器可与其他平腹蛛类加以区别, 见以上属的鉴别特征。

关键词 平腹蛛科, 新属, 新种

分类号 Q959.226

During studying Chinese gnaphosids^[1], we found two new genera. Genus *Allozelotes* belongs to the zeloting spiders^[2] which have the combined presence of a preening comb on metatarsi 1-3, but can be distinguished from other zelotine spiders by the very specific characters of the genitalic structures. Genus *Coillina* can be recognized from other gnaphosids by having an unique coiled long embolus; lacking of the preening comb on metatarsi 1-3 and no keel or lamina on the retromargin of the chelicera.^[3,4]

Abbreviation used: AER= anterior eye row, AL= abdomen length, ALE= anterior lateral eye, ALE-PLE= interval between ALE and PLE, AME= anterior median eye, AME-AME= interval between AMEs, AW= abdomen width, CL= carapace length, CW= carapace width (measured at the widest position), MOQ= median ocular quadrate, PER= posterior eye row, PME= posterior median eye, PME-PME= interval between PMEs, PME-

PLE= interval between PME and PLE, TL= total length.

1 *Allozelotes*, new genus

Type species: *Allozelotes lushan* sp. nov. (figs. 1 ~ 9)

Etymology: The generic name is derived from the specimens having a preening comb on metatarsi 1-3, which is similar to genus *Zelotes*, but the two genera can be easily separated by the genitalic structure, "allo" means not similarity at all.

Diagnosis: Specimens of the new genus *Allozelotes* is similar to genus *Zelotes* by having preening comb on metatarsi 1-3. (fig. 6), but can be separated by lacking of the intercary sclerite of male genital palp^[2]. By its own genitalic structures it can also be distinguished from the other genera of zelotines, the diagnoses are: a) the distal end of the embolus bends from retrolateral side of the genital bulb forwards to the prolateral, to form a bow-like structure (fig. 2, EMB); the basal sclerite of embolus semicircular-ring-like (fig. 2, EB); a macrosetae on the retrolateral tibial apophysis (fig. 2, MS, RTA); b) the epigynum having a large atrium (fig. 8, 9, A) and a pair of round copulatory sacs (fig. 9, CS). This new genus also can be distinguished from the Chinese zelotine spiders, *Drassyllus*, *Trachyzelotes* and *Urozelotes* respectively by the terminal apophysis not bifided, by lacking a cluster of stiff setae on the anteromedian surface of the chelicerae, by the distal end of terminal apophysis not pointed but cone-like. Moreover the new genus *Allozelotes* can also be recognized from the genera which only distribute in the foreign countries, such as *Camillilina*^[4] and *Setaphis*^[5], from the former by the PMEs smaller and not touching each other (fig. 4) from the latter by the different curvature of the embolus as well as the epigynal ducts.

Description TL 6. 10-8. 80(), 5. 10-6. 30(▽ ▽). Carapace oval in dorsal view, truncated anteriorly, widest between coxae 1 and 2, reddish brown, with some weak setae along radial grooves and on the margins, some stiff ones on the anterior margin and in the ocular area. Cervical grooves dark, distinctly, cephalic region slightly elevated. Thoracic groove longitudinal straight, dark brown. From dorsal view, AER slightly recurved, PER strong procurved. AME circular, dark, other eyes oval, light; PME pearlescent, somewhat obliquely; AME largest, ALE smallest, PME and PLE subequal; AMEs separated by their half radius, AME and ALE very closely, separated by quarter of AME radius; intervals of posterior eyes are subequal (fig. 4) MOQ trapezoid, width of front side larger than the back. Clypeal height equal to the AME radius. Chelicera promargin with 3 teeth, retromargin with one (fig. 7). Endites brown, distally yellowish brown, slightly converging, obliquely depressed with weak scopula; labium dark brown, subquadrate, anterior margin rounded with several stiff, longer setae. Sternum reddish brown, broad in middle, dark margins with a few weak setae, the posterior end slightly extends between coxae. Legs reddish brown. Leg formula: 4123. Typical Leg spination pattern () femora: 1, 2, 3, 4 1-1-0;

patellae: p 0-1-0, r 0-1-0; r 0-1-0; tibiae: d 0-1-0, p 1-1-1, r 0-1-1, v 0-0-2; r 1-1-1, v 2-2-2; metatarsi: d 1-0-1, p 1-0-0, r 1-0-1, v 2-2-0, d 1-0-0, p 1-1-1, v 2-2-2, Tarsi and metatarsi with scopulae, tarsi with 2 dentate claws and claw tufts, Metatarsi 13. with preening comb. Abdomen light grayish yellow. Six spinnerets, the medians yellowish brown, smallest, others brown; the anterior laterals longest, with 3 pairs of the large spigots (fig. 5, 14). Palp with a bow-like embolus, a semicircular ring-like embolar basal sclerite, distal end of terminal apophysis conical. The retrolateral tibial apophysis with a macroseta (figs. 1~3). Epigynum has a large atrium and a pair of rounded copulatory sacs (figs. 8-9).

1.1 *Allozelotes lushan* sp. nov. (figs. 1~9)

Type material: Holotype ♀ paratypes 12 Lushan Mt. (29°30' N, 115°54' E) Jiangxi Province, 17 June, 1987, leg. Wang Jiafu; 1 Suining County, 28 May, 1996; 1 Gouloufeng, Hengyang County, Hunan Province, 2 Aug., 1997, leg. Yin Changmin, Yan Hengmei.

Etymology: The specific name is derived from the holotype locality, Mt. Lushan.

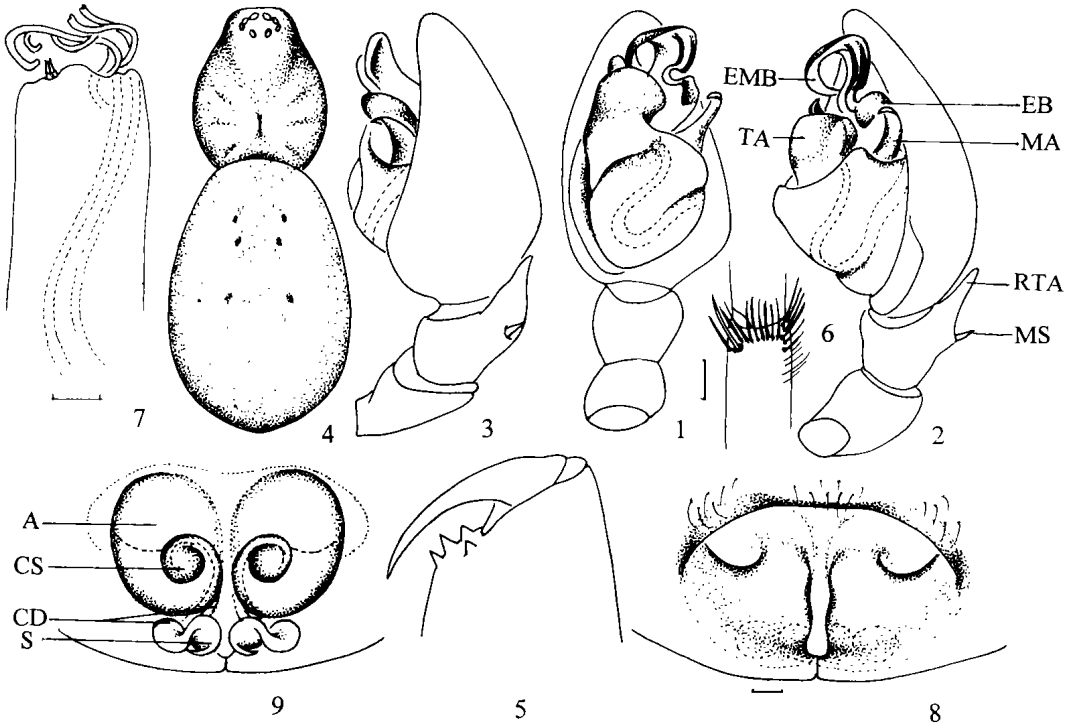
Diagnosis: This new species is affined to the zelotine spiders by having preening comb on metatarsi 13, but can be distinguished from zelotine spiders by: the bow-like distal end of embolus; semicircular ring-like embolar basal sclerite; a macroseta on the retrolateral tibial apophysis; the epigynum having a large atrium, and a pair of round copulatory sacs.

Male: Holotype TL 5.10, CL 2.55, CW 1.80, AL 2.75, AW 1.65. femur 1.55, AER recurved, PER strong procurved. Eyes size and intervals: AME 0.14, ALE 0.08, PME 0.105, PLE 0.09, AME-AME 0.05, AME-ALE 0.02, PME-PME 0.095, PME-PL 0.06, ALE-PL 0.03, MOQ length 0.36 front side width 0.34, back side width 0.31. Coloration: Carapace reddish brown, thoracic groove dark brown, cervical and radial grooves pale grayish black; palp (except tarsus), leg, sternum and spinnerets as the same as carapace; endite brown, distally yellow brown; labium dark brown. Abdomen light grayish yellow brown. Chelicera promargin with 3 teeth, the median large, retromargin with one. Leg spination: patellae: p 0-1-0, r 0-1-0; tibiae: d 1-1-1, p 0-1-1, r 0-1-1, v 2-2-2; metatarsi: p 1-1-1, r 1-1-1, v 2-2-2; v 2-0-2. From ventral view, the embolus initiated from a opened ring-like basal sclerite, extends from the retrolateral towards prolateral side to form a bow-like structure; the distal end of terminal apophysis conical (fig. 2, TA); median apophysis longer and thinner (fig. 2, MA); a short macroseta on the retrolateral tibial apophysis.

Female: TL 6.10-8.80, TL 7.90, CL 2.70, CW 3.80, AL 5.20, AW 3.40, femur 1.70. Eyes size and intervals: AME 0.15, ALE 0.105, PME 0.11, PLE 0.10, AME-AME 0.04, AME-ALE 0.025, PME-PME 0.095, PME-PL 0.105, ALE-PL 0.02. MOQ length 0.36, front side width 0.35, back side width 0.27, Body coloration as same as the male. Leg length (measured from one paratype) as follows:

Femur	patella+ tibia	metatarsus	tarsus	Total
1.90	2.00	1.00	0.75	5.65
1.70	1.90	1.00	0.70	5.30
1.60	1.60	1.00	0.70	4.90
1.90	2.10	1.85	0.75	6.60

Leg formula: 4123



Figs. 1 ~ 9 *Allozelotes Lushan* sp. n.

1. Palpal organ, ventral(触肢器,腹面观) 2. Ditto, retrolateral(触肢器,后侧面观)
 3. Ditto, prolateral(触肢器,前侧面观) 4. Body(♀)(外形)
 5. 3 pairs of large spigots on anterior lateral spinneret (▽)(前侧纺器上的3对大纺管)
 6. preening comb on III metatarsus(第III后跗节的梳理器)
 7. Chelicera(♀)(螯肢) 8. Epigynum(生殖厣) 9. Vulva(阴门)

Abbreviation: A, atrium; CD, Connective duct; CS, copulatory sact; EB, embolar base; EMB embolus; MA, median apophysis; MS, macroseta; RTA, retrolateral tibial apophysis; S, Spermatheca; TA, terminal apophysis.

Leg spinnation: femora: d 1-1-0; d 1-1-0; patellae: p 1-0-0, r 0-1-0; r 0-1-0; tibiae: d 0-1-0, p 1-1-1, r 0-1-1, v 0-0-2; p 1-1-1, r 1-1-1, v 2-2-2; metatarsi: d 1-0-1, p 1-0-0, r 1-0-1, v 2-2-0; d 1-0-0, p 1-1-1, r 0-0-1, v 2-2-2. The spermatheca round (fig. 9, S) the connective duct revolves a circle beside the spermatheca, extends dorsally to

the copulatory sac. (figs. 9, CD)

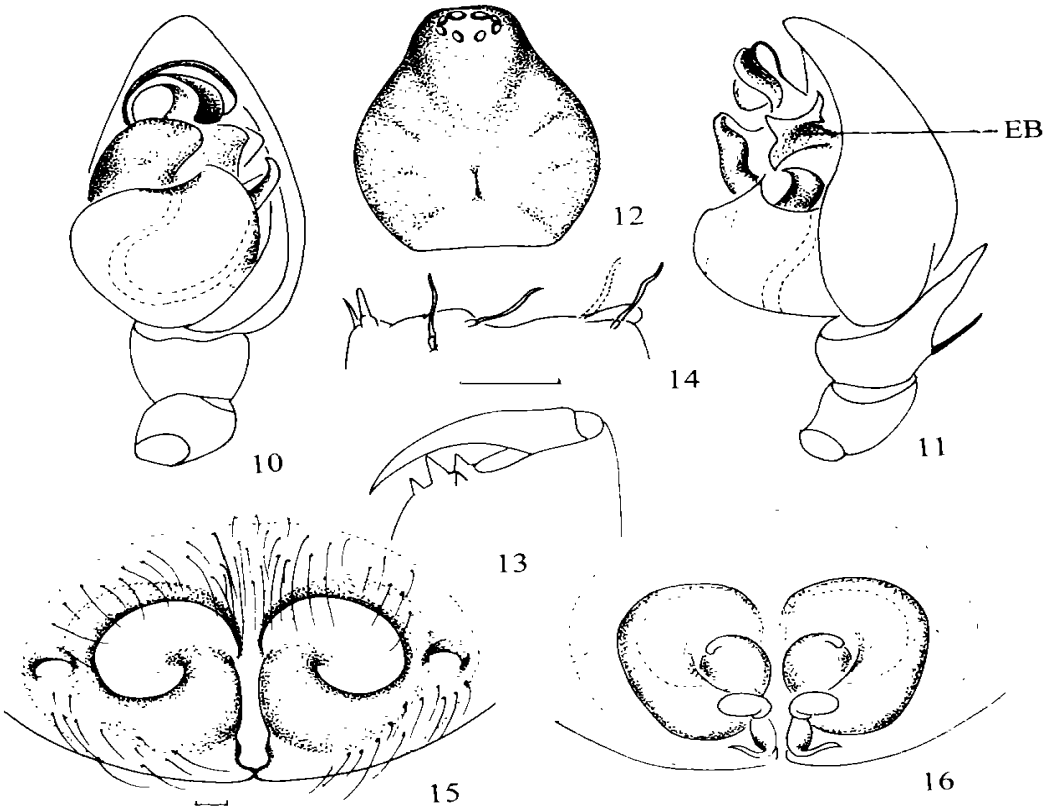
Distribution: China (Jianxi, Hunan Province)

1. 2 *Allozelotes dianchi* sp. n. (figs. 10 ~ 16)

Type material: Holotype ♀, paratype 1 ♂. Dianchi (24 54 N, 102 42 E). Yunnan Province, 4 May, 1983, leg. Wang Haizhen.

Etymology: The specific name is derived from the holotype locality, Dianchi County.

Diagnosis: The new species is close to type species *Allozelotes lushan*, but can be distinguished by (1) in retrolateral view, the embolic base trapezoid shape and larger (fig. 11, EB). While that of the latter, rectangle and smaller (fig. 2, EB), median apophysis shorter and thicker, the retrolateral tibial macroseta longer than that of the latter; (2) the spermatheca ellipsoid vertically; (3) the connective duct shorter and thicker than that of the latter (figs. 9, 16).



Figs. 10 ~16 *Allozelotes dianchi* sp. n.

- 10. Palpal organ, ventral (触感器, 腹面观) 11. Dit to, retrolateral (触感器, 后侧面观)
- 12. Carapace (♀) (背甲) 13. Chelicera (♀) (螯肢)
- 14. 3 pairs of large spigots on anterior lateral spinneret (♂) (前侧纺器上的3对大纺管)
- 15. Epigynum (生殖厝) 16. Vulva (阴门)

recurved, PER procurved. Eyes size and intervals: AME 0.16, ALE 0.12, PME 0.14, AME-ALE 0.075, AME-ALE 0.05. MOQ length 0.45, front side width 0.375, back side width 0.35. Coloration: Carapace as female reddish brown; thoracic groove dark brown; cervical and radial grooves grayish (fig. 12); palp (except tarsus), leg, sternum and spinnerets brown; labium darker. Abdomen grayish yellow brown, 3 pairs of muscle impressions visible, pale yellow. Chelicera as female with 3 pramarginal teeth and one retromarginal (fig. 13). Leg spination: femora: d 1-1-0; patellae p 0-1-0, r 0-1-0, p 0-1-0, r 0-1-0; tibiae: d 1-1-0, p 1-1-0, r 1-1-0, v 1-2-2; p 1-1-1, r 1-1-1, v 2-2-2; metatarsi: d 0-1-0, p 0-1-1, r 0-0-1, v 2-0-0; d 1-0-1, p 1-1-1, r 0-1-1, v 2-2-2. The palpal organ from ventral view with a bowed embolus, at the embolic base has a larger opened ring-like structure as in the type species of the new genus. The median apophysis short and thick, retrolateral tibial apophysis and the macroseta longer (figs. 10~11).

Female: TL 8.60, CL 2.80, CW 2.40, AL 5.80, AW 3.40, femur 1.60. Eyes size and intervals: AME 0.155, ALE 0.125, PME 0.155, PLE 0.155, AME-ALE 0.10, AME-ALE 0.05, PME-PME 0.10, PME-PLE 0.07, ALE-PLE 0.05. MOQ length 0.475, front side width 0.41, back side width 0.354. Body coloration as same as the male. Leg spination: femora: d 1-1-1, p 0-1-1, r 0-1-1; d 1-0-0, r 0-0-1; patellae: p 0-1-0, r 0-1-0; tibiae: d 1-0-0, p 1-0-1, r 0-1-1, v 1-2-2; p 1-1-0, r 1-1-1, v 2-2-2, metatarsi: v 1-0-0; v 1-0-0; d 0-1-1, p 1-1-1, r 1-0-0, v 2-0-0; d 0-1-1, p 0-1-1, r 0-1-1, v 2-2-2. The spermatheca ellipsoid vertically, the connective duct between spermatheca and copulatory sac is shorter and thick (figs. 15, 16).

Distribution: China (Yunnan Province).

2 *Coillina*, new genus

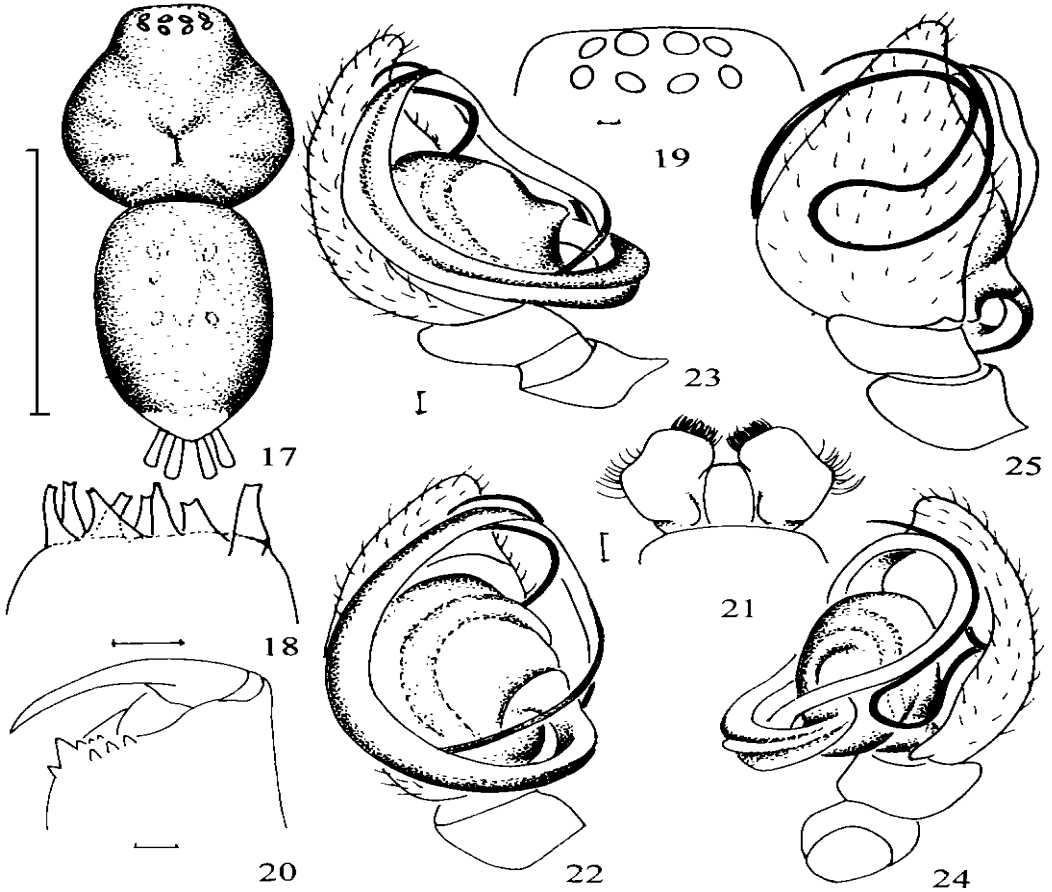
Type species: *Coillina baka* sp. nov. (figs. 17~25)

Etymology: The generic name is derived from the coiled embolus of type specimens and is feminine in gender.

Diagnosis: Specimens of the genus *Coillina* can be recognized from other gnaphosids by having a unique coiled long embolus, lacking of the preening comb on metatarsi 13. and no keel or lamina on the retromargin of the chelicera. The coiled embolus of this new genus is similar to the genera *Apodrasodes*^[6], *Apophyllus*^[7] and *Fedotovia*^[8], but can be distinguished by the emboli of the latters not extending into the cymbium alveolus. Moreover, it can be separated from *Apodrasodes* also by the different initial position of the embolus.

Description TL 6.85-6.95. Carapace pyriform in dorsal view, widest between coxa and , grayish brown; ocular area black, margins brown; cervical and radial grooves pale grayish black; cephalic region slightly elevated, thoracic groove longitudinal straight, short, brown. From dorsal view, AER slight procurved, PER almost straight, A ME circu-

lar, largest, dark; other eyes oval, light; PME's pearlescent, obliquely; AMEs separated by their radius. AME-ALe by half radius; PME-PME smaller than PME-PLe, ALe-PLe very closely (fig. 19), MOQ subsquare (fig. 19). Clypeal height equal to $2/3$ AME diameter. Chelicera promargin with 3 teeth and 2 denticles, retromargin with 3 teeth subequale (fig. 20).



Figs. 17 ~25 *Coillina baka* sp. n.

- 17. Body (▽) (外形)
- 18. 4 pairs of spigots on anterior lateral spinneret (前侧纺器上的4对大纺管)
- 19. Eyes (眼) 20. Chelicera (螯肢)
- 21. Endite and labium (颚叶和下唇)
- 22. Palpal organ, ventral (left) (触肢器, 腹面观) (左侧)
- 23. Ditto, prolateral (left) (触肢器, 前侧面观)
- 24. Ditto, retrolateral (left) (触肢器, 后侧面观)
- 25. Ditto, dorsal (right), the embolus being pushed out of cymbium alveolus (触肢器, 插入器被挤压出跗舟腔窝) (右侧)

Endites grayish yellow brown, paler distally, converging, obliquely depressed, with dense scopula; labium longer than wide, dark brown (fig. 21). Sternum brown, oval, anterior half wider, posterior half gradually narrow, the posterior end does not extend between coxae

Color of legs and spinnerets as same as carapace. Leg formula: 4, 1, 2, 3. Typical leg spinnation pattern, femora: I d 0-1-1, v 2-0-0; d 0-1-1, v 2-0-0; d 1-1-1, p 0-1-1, r 0-1-1; d 1-1-0, p 0-0-1, r 0-0-1 v 0-0-1; tibiae v 2-0-2; v 1-2-2; d 1-0-0, p 1-1-2, r 0-1-1, v 2-2-2; p 1-0-1, r 0-1-1, v 2-2-2; metatarsi: v 2-0-0, v 2-2-0, d 1-0-0, p 1-1-1, r 0-1-1, v 2-2-2; p 1-2-2, r 1-2-2, v 2-2-2. Tarsi and metatarsi with scopulae, tarsi with 2 dentate claws and claw tufts. Abdomen light grayish black. Six spinnerets slender, the distal end of the anterior laterals(0.83 × 0.40) slightly wider than the basal, with 4 pairs of the silk glands'spigots(fig. 18). Palpal organ large, with an unique coiled long embolus. The embolus initiates from the middle of the genital bulb, near retrolateral side(figs, 22 ~ 24), coils a circle clockwise(from ventral view); the width of this portion of embolus from broad narrowed into a needle-shaped. The needle-shaped portion of embolus extends towards to the back surface of genital bulb, conceals in the alveolus of the cymbium and forms a loop there, immediately the embolus along cymbium promargin extends out of the alveolus. Its tip can be seen again in the ventral view of the palpal organ(fig. 25).

2.1 *Coillina baka* sp. nov. (figs. 17 ~ 25)

Type material: Holotype ♀ Paratype 1 ♀, Baka, Menglun County (20°30'N, 100°30'E) alt. 1020M, Yunnan Province, 24, Nov. 1997 leg. Yan Hengmei.

Etymology: The specific name is derived from the holotype locality, Baka, Menglun County.

Diagnosis: This new species can be recognized from other gnaphosids by the unique coiled long embolus.

Male: Holotype TL 6.95, CL 3.25 CW 2.60, AL 3.70, AW 1.90. Femur 2.90. AER slight procurved, PER procurved. Eyes size and intervals; AME 0.205, ALE 0.175, PME 0.170, PLE 0.197, AME-AME 0.10, AME-ALE 0.045, PME-PME 0.095, PME-PLE 0.125, ALE-PLE 0.075. MOQ length 0.55, front side width 0.46, back side width 0.36 (fig. 19). Coloration: carapace, legs and spinnerets grayish brown. Abdomen light grayish black. Sternum and endites brown; labium darker, endites grayish yellow brown. Cheliceral promargin with 3 teeth and 2 denticles, retromargin with 3 teeth, subequal(fig. 20). Endites converging, obliquely depressed, with dense scopulae. Labium longer than wide(fig. 21). Leg length measured as follows:

femur	patella+ tibia	metatarsus	tarsus	Total
2.25	3.40	1.50	0.95	8.10
2.00	2.90	1.30	0.80	7.00
1.50	2.40	1.30	0.80	6.00
2.00	3.30	2.00	1.00	8.30

Leg formula 4123. Leg spinnation: as shown above. Palpal organ large, with an unique, coiled long embolus. No distinct retrolateral tibial apophysis.

Female unknown.

Distribution: China(Yunna Province)

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