

## 中国齿足条蜂亚属一新种记述 (膜翅目, 蜜蜂总科, 蜜蜂科)

黄海荣<sup>1,2</sup> 朱朝东<sup>2\*</sup> 吴燕如<sup>2</sup>

1. 北京林业大学省部共建森林培育与保护重点实验室 北京 100083

2. 中国科学院动物研究所 北京 100101

**摘要** 记述中国昆仑山脉中齿足条蜂亚属 *Petalostemon* 1 新种, 纳赤台条蜂 *Anthophora* (*Petalostemon*) *nachitaiensis* sp. nov.; 同时给出中国齿足条蜂亚属 6 个物种雄性的分种检索表。新种模式标本保存于中国科学院动物研究所动物标本馆。

**关键词** 蜜蜂科, 齿足条蜂亚属, 新种, 中国。

**中图分类号** Q969.557.7

齿足条蜂亚属 *Petalostemon* 为条蜂属 *Anthophora* (蜜蜂科 Apidae 条蜂族 Anthophorini) 14 个亚属之一 (Michener, 2000), 目前世界已知 21 种 (Brooks, 1988; Michener, 2000), 分布于地中海, 向东至蒙古东南部。该亚属我国分布有 6 种, 以蒙新区为主, 向南延至北京 (吴燕如, 2000)。

**亚属征** 体长 10.0~12.5 mm。雌性触角第 1 鞭节等于 2.5~4.3 节之和; 颜面黑色; 颞眼距宽为长的 3.0~6.3 倍; 唇瓣顶端具若干指状叶。雄性颜面具浅色斑; 上唇端缘具 3 小叶状突; 后足腿节或胫节、跗节具齿状突起; 无胫基板; 第 7 背板顶端具 2 亚中齿, 有时有中纵脊; 第 6 腹板端缘具深凹, 第 7 腹板的腹突具侧突, 第 8 腹板顶端具宽凹, 顶侧呈角状; 生殖基节顶端特化。

记述了采自青海格尔木昆仑山脉的齿足条蜂亚属 1 新种, 纳赤台条蜂 *A. (P.) nachitaiensis* sp. nov., 同时给出中国齿足条蜂亚属 6 个物种雄性的分种检索表。模式标本保存于中国科学院动物研究所动物标本馆。

纳赤台条蜂, 新种 *Anthophora* (*Petalostemon*) *nachitaiensis* sp. nov. (图 1~8)

**雄性** 体长 10 mm; 体中型。

**头部**、胸部、腹部第 1 节背板及各足外表面密被白色长毛; 中胸盾片基半部杂少许黑褐色长毛; 前足胫节及中足胫节毛浅金黄色; 前足跗节、中足第 1~4 跗节及后足第 1~4 跗节内侧毛金黄色; 中足端跗节及后足端跗节内侧毛白色, 外侧毛黑褐色; 后足胫节黑褐色短毛; 腹部第 2~6 节背板被稀的白

色毛。

**上唇** (除基部两侧各 1 圆的黑褐色斑)、唇基 (除两侧各具 1 细黑斑)、眼侧区内侧端缘、额唇基区的横斑、触角柄节前表面均为黄色; 中胸盾片具铜绿色金属光泽; 翅基片、小盾片、并胸腹节、腹部第 1 节背板具蓝绿色金属光泽; 后盾片具赤褐色金属光泽; 翅无色透明, 翅脉黑褐色; 腹部第 2~6 节背板及各足腿节、胫节、端跗节外表面具暗蓝色金属光泽; 各足内表面及第 1~4 节跗节外表面黑褐色, 无金属光泽。

**头宽** 大于长, 等于胸宽; 颊最宽处显著窄于复眼宽; 上颚 1 齿尖; 唇基强隆起; 上唇端缘中央凹陷, 点刻粗大且稀, 不规则分布; 触角长, 达并胸腹节; 柄节中部外表面隆起, 内表面凹陷; 鞭节末端截断状, 各节内表面隆起; 中胸盾片、小盾片及后盾片表面光滑闪光, 点刻极细; 小盾片长, 其长度为后盾片长度的 5 倍左右; 小盾片、后盾片及并胸腹节几处于同一平面 (侧面观); 并胸腹节基部无纵皱; 后足腿节稍膨大, 外表面隆起, 内表面凹陷; 后足基跗节宽, 其长度为宽的 2 倍 (不包括齿), 内侧面距基部 2/3 处具 1 齿突 (图 4); 前足端跗节稍膨大, 中足端跗节极膨大 (图 3), 后足端跗节稍膨大且长。

**腹部** 宽扁, 第 2 节最宽, 后几节逐渐变窄; 腹部各节背板点刻极细, 中部稍稀两侧较密; 第 7 背板端缘平直, 中部稍凹陷 (图 5); 第 7~8 腹板及生殖节见图 6~8。

**雌性**: 未知。

**正模** ♂, 中国青海格尔木纳赤台, 2007-07-08,

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\* 通讯作者: zhucd@ioz.ac.cn

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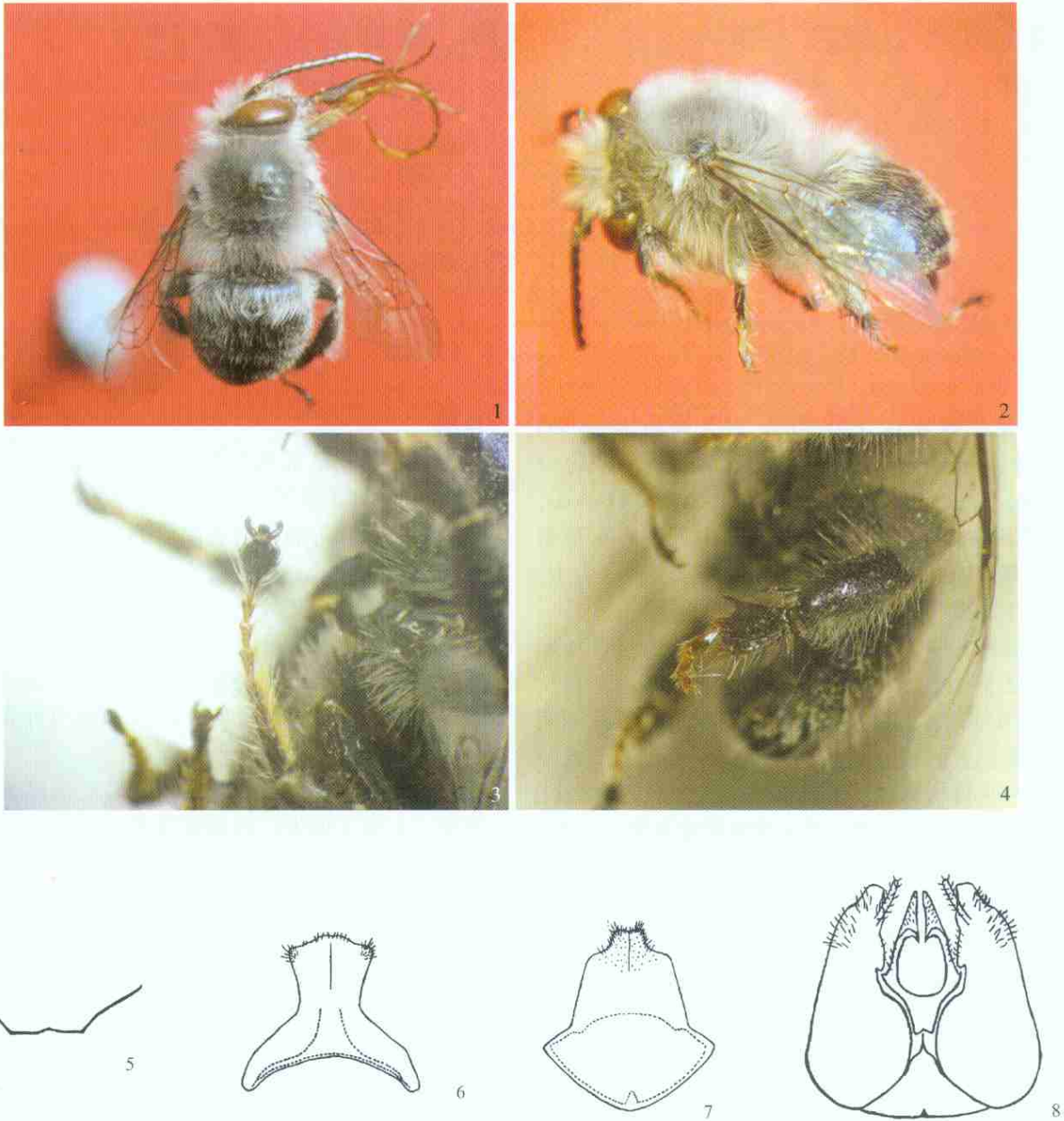


图 1~ 8 纳赤台条蜂, 新种 *Anthophora (Petalostemon) nachitaiensis* sp. nov.

1. 整体背面观 (body in dorsal view) 2. 整体侧面观 (body in lateral view) 3. 中足端跗节 (distitarsus of middle leg in lateral view) 4. 后足基跗节 (basitarsus of hind leg in lateral view) 5. 第 7 背板 (T7 of the male in ventral view) 6. 第 7 腹板 (S7 of the male in ventral view) 7. 第 8 腹板 (S8 of the male in ventral view) 8. 生殖节 (genital segment of the male in ventral view)

3 700 m, 黄海荣采。

分布: 青海。

采访植物: 未知。

词源: 该种以模式标本采集地纳赤台 Nachitai 命名。

讨论 新种与汉森条蜂 *A. (P.) hansenii* 相似, 但差别明显: 1) 体被金属光泽; 后者体不具金属光泽; 2) 颜面奶黄色; 后者颜面乳白色。

中国齿足条蜂亚属物种检索表

雄性 (♂)

- 1 后足腿节特化, 顶端有 1 弯钝齿, 中部具 1 大齿, 两齿间呈弧形; 后基跗节正常, 内侧不具齿突或膨大或较长; 体长 10.5~ 11.0 mm ..... 白颜条蜂 *A. (P.) albifacies* Alfken
- 后足腿节正常, 顶端无齿; 后足基跗节宽, 内侧特化, 具齿突或膨大或较长 ..... 2
- 2 后足基跗节特化, 内侧具齿 ..... 3
- 后足基跗节内侧不具齿, 但膨大或较长 ..... 5

- 3 后足基跗节内侧距基部 2/3 处具 1 齿突 (图 3); 中足端跗节极膨大 (图 3); 体具金属光泽 (图 1~ 2); 胸部被白毛杂有黑毛; 体长 10 mm ..... 纳赤台条蜂, 新种 A. (P.) nachitaiensis sp. nov. 后足基跗节内侧齿突不在 2/3 处; 中足端跗节正常; 腹部偶见铜色光泽 ..... 4
- 4 后足基跗节内侧中部具 1 齿突; 胸部被白毛杂有黑毛; 腹部第 2~ 6 节背板边缘具白毛带; 体长 8~ 9 mm ..... 汉森条蜂 A. (P.) hansenii Morawitz 后足基跗节端部内侧距基部 2/3 处具 1 齿突, 顶端也具 1 齿突, 两齿突间呈弧状凹; 胸部被黄褐色毛; 腹部偶见铜色光泽, 不具毛带, 第 1~ 3 节背板被白毛, 第 4~ 7 节被稀的黑褐色毛; 体长 10.5~ 12.0 mm ..... 铜腹条蜂 A. (P.) aeneiventris Hedicke
- 5 后足基跗节端半部明显宽大; 胸部被灰白色毛; 腹部背板被白毛, 第 1~ 4 节背板边缘形成白毛带; 体长 9~ 10 mm ..... 棒跗条蜂 A. (P.) clavitarsis Wu 后足基跗节长为宽的 4 倍; 体被白色毛; 腹部第 2~ 6 节背板边缘

具宽的白毛带; 体长 8.0~ 8.5 mm ..... 无戎条蜂 A. (P.) anoplura Wu

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A NEW SPECIES OF THE SUBGENUS PETALOSTERNON (HYMENOPTERA, APOIDEA, APIDAE) FROM CHINA

HUANG Hai-Rong<sup>1, 2</sup>, ZHU Chao-Dong<sup>2\*</sup>, WU Yan-Ru<sup>2</sup>

1. The Key Laboratory for Silviculture and Conservation of Ministry of Education, Beijing Forestry University, Beijing 100083, China

2. Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

**Abstract** *Anthophora (Petalosternon) nachitaiensis* sp. nov. is described from Kunlun Mountains. A key is given to males of Chinese species of the subgenus *Petalosternon*. The holotype is deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing.

*Anthophora (Petalosternon) nachitaiensis* sp. nov. (Figs. 1-8)

Male. Body moderate sized, length 10 mm.

Head, thorax, T1 and outer side of all legs with long white hairs; the basal part of the mesoscutum with some long blackish brown hairs; fore and mid tibiae with light golden hairs; the inner side of fore tarsi, 1-4 middle tarsomeres and 1-4 hind tarsomeres with golden hairs; the inner side of middle distitarsus and hind distitarsus with white hairs, outer side of which with blackish brown hairs; hind tibiae with blackish brown short hairs; T2-T6 with sparse white hairs.

Following parts of head yellow: labrum (except for a blackish brown spot at the basal part of each side), clypeus (except for a black spot at each side), inner apex of the para-ocular area, transverse spot on the supraclypeal area, outer side of scape; mesoscutum aerugo with metallic reflections; stigma, scutellum, propodeum and T1 with bluish green metallic reflections; metanotum purple-brown with metallic reflections; all wings translucent, veins of forewing strong brown; outer side of T2-T6 and all femora, tibiae, distitarsi dull blue with metallic reflections; the inner side of all legs and the outer side of 1-4 tarsomeres strong brown, without

metallic reflections.

Head wider than long, but as wide as to thorax; compound eyes wider than gena in lateral view of head; each mandible with one pointed tooth; clypeus strongly convex; frontal labrum concave, labrum with sparse and irregular punctures; antennae long, reaching propodeum; the outer side scape convex in the middle, inner side of it concave; flagellum truncate apically, inner side of each flagellum convex; the surface of mesoscutum, scutellum and metanotum smooth and shiny, with slight punctures; scutellum long, 5 times longer than metanotum; scutellum, metanotum and propodeum at the same plane (lateral view); basal part of propodeum without rugae; hind femora slightly strong, with the outer side convex, inner side concave; hind basitarsomeres wide, 2 times longer than wide (except for the produced tooth), the inner side of hind basitarsomeres with one produced tooth at 2/3 from the base (Fig. 4); fore distitarsomeres slightly enlarged; middle distitarsomeres strongly enlarged (Fig. 3), hind distitarsomeres slightly enlarged and long.

The metasoma broad and flat, T2 is the widest, the last segments become slenderer; all terga of metasoma with slight punctures, sparse in central area and dense in the both edge sides; lateral extremity of T7 (Fig. 5) flat, but slightly concave in the middle; T7-T8 and genital segment see Figs. 6-8.

This species is similar to *A. (P.) hansenii*, but it can be distinguished from the latter by following features: 1) body with metallic reflections; 2) face yellow.

\* Corresponding author.

Holotype ♂, Nachitai, Geermu, Qinghai Province, 3700 m, 8 July 2007, HUANG Hai-Rong.

Distribution. China, Qinghai.

Floral associations. Unknown.

Etymology. The name of the new species is derived from the locality where the holotype was collected.

Key to males in the subgenus of *Petalostemon*

- 1. Hind femur specialized, with one crenate tooth produced at the apex, another bigger tooth in the middle, regions between both teeth arch-shaped; hind basitarsomere normal, without tooth or enlarged or much more longer in the inner side; body length 10.5-11.0 mm ..... A. (P.) *allifacies* **Alfken**  
Hind femur normal, without tooth at the apex; hind basitarsomere broad, with a tooth or enlarged or much more longer in the inner side ..... 2
- 2. Hind basitarsomere specialized, with a tooth at the inner side ..... 3  
Inner side of hind basitarsomere without tooth, but enlarged or much more longer ..... 5
- 3. One tooth present at 2/3 from the base of the inner side of hind basitarsomere (Fig. 3); middle distitarsomere strongly enlarged (Fig. 3);

Key words *Apidae*, *Petalostemon*, new species, China.

body with metallic reflections (Figs 1-2); thorax with white hairs and a few black hairs; body length 10 mm ..... A. (P.) *nachitaisensis* **sp. nov.**

Tooth absent from the base of the inner side of 2/3 hind basitarsomere; middle distitarsomere normal; metasoma cupreous with metallic reflections occasional ..... 4

- 4. One tooth present at the middle point of the inner side of hind basitarsomere; thorax with white hairs and a few black hairs; T2-T6 with white hairs; body length 8-9 mm ..... A. (P.) *hansanii* **Morawitz**  
One tooth present at 2/3 from the base of the inner side of hind basitarsomere, another tooth present at the apex, the region between both teeth arch-concaved; thorax with yellowish brown hairs; metasoma cupreous with metallic reflections occasionally, without hair bands; T1-T3 with white hairs, T4-T7 with sparse dull brown hairs; body length 10.5-12.0 mm ..... A. (P.) *aneiventris* **Hedicke**

- 5. Distal part of hind basitarsomere obviously broad; thorax with gray-white hairs; metasoma with white hairs, T1-T4 with an apical white hair band; body length 9-10 mm ..... A. (P.) *davitarsis* **Wu**  
Hind basitarsomere 4 times longer than wide; body with white hairs; T2-T6 with broad and an apical white hair band; body length 8.0-8.5 mm ..... A. (P.) *anoplura* **Wu**