

角蟾科一新亚种——炳灵角蟾梵净山亚种

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摘要:报道了角蟾科一新亚种,该亚种具角蟾属特征,与峨眉角蟾种组中的炳灵角蟾(*Megophrys binlingensis*)形态特征最为相近,但与该组成员又有明显区别,被命名为炳灵角蟾梵净山亚种(*M. b. fanjingmontis* subsp. nov.)。本亚种主要鉴别特征为犁骨棱较弱,后端无犁骨齿,上颌有细齿;第一、二指上婚刺细密,趾侧缘膜窄;体腹面斑少,两侧黑褐色长形斑明显;体型较大,雄性头体长大于 60.00 mm;趾间具 1/3 蹼。

关键词:角蟾科;炳灵角蟾梵净山亚种;新亚种

中图分类号:Q959 **文献标识码:**A **文章编号:**0250-3263(2012)04-135-04

Megophrys binlingensis fanjingmontis: A New Subspecies of Megophryidae from Guizhou, China

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Abstract: This paper describes a new subspecies of Megophryidae from Guizhou Province, China, which has typical characteristics of *Megophrys omeimontis* group of the genus *Megophrys*, however, it is also distinguished from other species of this group in morphology. The new subspecies is named as *M. binlingensis fanjingmontis* subsp. nov., owing to more similarity to *M. binlingensis* of *M. omeimontis* group in morphological character.

Holotype: No. trxy01, adult male; collected from Heiwan River region in Fanjing Mountain of Jiangkou County, Guizhou Province in June, 2010. Altitude; about 900m.

Allotype: No. trxy02, adult female; collected from Heiwan River region in Fanjing Mountain of Jiangkou County, Guizhou Province.

Paratype: No trxy03, trxy04, trxy05, adult male; collected from Heiwan River region in Fanjing Mountain of Jiangkou County, Guizhou Province.

All specimens are kept in Animal Laboratory of Bioscience and Chemistry Department, Tongren University.

Diagnosis: This subspecies can be distinguished by the following characters: vomerine ridge is tiny, without vomerine teeth, and slender teeth grow on upper jaw; nuptial spinules are small and dense on the first two fingers of males; narrow film displays at the edge of outside toes; few spots scatter on chest and belly, marked dark brown strips occur on the both sides of chest and belly; body is big, SVL > 60.00 mm; 1/3 web exit between toes.

However, compared with the new subspecies, the adult males of *M. binlingensis* are smaller, 45.0 mm < SVL < 51.0 mm, and their web trace exist between toes.

基金项目 贵州省教育厅自然科学研究项目(No. 2009088);

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收稿日期:2012-03-15, **修回日期:**2012-05-06

M. spinata differs from the new subspecies in the following characters: nuptial spinules of *M. spinata* are bigger and sparser on the first two fingers of males; markedly wide film at the edge of outside toes, 1/2 web between toes; 47.2 mm < SVL (males) < 54.4 mm; more than ten dark spots on chest and belly. However, our new subspecies have five, six, or seven dark spots on chest and belly, without spot in the middle of belly.

For *M. omeimontis*, its vomerine ridge is strong, with vomerine teeth; many dark spots are in the middle of belly, and the dark patterns don't exist in the form of strip on the both sides of chest and belly; web trace exist between toes; its body is smaller, 56.0 mm < SVL (males) < 59.5 mm.

Key words: Megophryidae; *Megophrys binlingensis fanjingmontis* subsp. nov.; New subspecies

2010年6月在贵州梵净山国家级自然保护区进行野外动物资源调查时,采集到1只角蟾科雄性标本,结合本实验室以前采集的同种4只标本(其中3只为雄性,1只为雌性),查阅有关资料^[1-2],鉴定此类标本属于角蟾科峨眉角蟾种组。这些标本与峨眉角蟾种组中的炳灵角蟾(*Megophrys binlingensis*)、棘指角蟾(*M. spinata*)、峨眉角蟾(*M. omeimontis*)形态特征较为相似,但又有所不同,因与炳灵角蟾的形态特征最为相近,故命名为炳灵角蟾梵净山亚种(*M. b. fanjingmontis*)。所有标本均保存于铜仁学院生物专业动物标本室。

炳灵角蟾梵净山亚种,新亚种 *Megophrys binlingensis fanjingmontis* (图1)

正模:标本号 trxy01, ♂, 成体:贵州江口县梵净山黑湾河一带,海拔900 m;采集于2010年6月。

配模:标本号 trxy02, ♀, 成体:贵州江口县梵净山黑湾河一带。

副模:标本号 trxy03、trxy04、trxy05, ♂, 成体:贵州江口县梵净山黑湾河一带。

本亚种的外形量度见表1,数据均用不锈钢游标卡尺(力易得 E0512,量程200 mm,精度0.02 mm)测量所得。

表1 炳灵角蟾梵净山亚种标本量度(mm)及与头体长之比率

Table 1 Measurements (mm) of *Megophrys binlingensis fanjingmontis* and ratios of each measurement to snout-vent length

| 项目 Item | 正模 trxy01 (♂) | | 配模 trxy02 (♀) | | 副模 Paratype | | | | | |
|---------------------------------------|-----------------|----------------|-----------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|
| | Holotype trxy01 | | Allotype trxy02 | | trxy03 (♂) | | trxy04 (♂) | | trxy05 (♂) | |
| | 长度 Length | 比率(%) Ratio | 长度 Length | 比率(%) Ratio | 长度 Length | 比率(%) Ratio | 长度 Length | 比率(%) Ratio | 长度 Length | 比率(%) Ratio |
| 头体长 Snout-vent length | 61.2 | | 71.6 | | 64.9 | | 60.4 | | 61.3 | |
| 头长 Head length | 17.4 | 28.43 | 20.7 | 28.91 | 18.8 | 28.97 | 18.2 | 30.13 | 17.3 | 28.22 |
| 头宽 Head width | 22.4 | 36.60 | 24.0 | 33.52 | 22.3 | 34.36 | 20.5 | 33.94 | 21.2 | 34.58 |
| 吻长 Snout length | 6.6 | 10.78 | 7.5 | 10.47 | 6.7 | 10.32 | 5.9 | 9.77 | 6.2 | 10.11 |
| 鼻间距 Internasal space | 6.9 | 11.27 | 7.8 | 10.89 | 7.0 | 10.79 | 6.9 | 11.42 | 7.8 | 12.72 |
| 眼间距 Interorbital space | 6.7 | 10.95 | 5.5 | 7.68 | 5.2 | 8.01 | 5.3 | 8.77 | 6.7 | 10.93 |
| 上眼睑宽 Width of upper eyelid | 5.9 | 9.64 | 7.3 | 10.20 | 5.7 | 8.78 | 5.6 | 9.27 | 6.5 | 10.60 |
| 眼径 Diameter of eye | 7.0 | 11.45 | 7.4 | 10.34 | 7.3 | 11.25 | 7.5 | 12.42 | 7.2 | 11.75 |
| 鼓膜径 Diameter of tympanum | 3.8 | 6.21 | 4.4 | 6.15 | 4.0 | 6.16 | 4.5 | 7.45 | 3.6 | 58.73 |
| 前臂及手长 Length of lower arm and hand | 26.9 | 43.95 | 32.0 | 44.69 | 28.0 | 43.14 | 26.4 | 43.71 | 28.0 | 45.68 |
| 前臂宽 Width of lower arm | 6.7 | 10.95 | 5.3 | 7.40 | 7.8 | 12.02 | 7.4 | 12.25 | 6.4 | 10.44 |
| 手长 Hand length | 16.1 | 26.31 | 17.6 | 24.58 | 16.4 | 25.27 | 14.5 | 24.01 | 16.0 | 26.10 |
| 后肢长 Hindlimb length | 96.0 | 156.86 | 111.4 | 155.59 | 98.4 | 151.62 | 90.0 | 149.01 | 95.3 | 155.46 |
| 胫长 Tibia length | 31.5 | 51.47 | 35.9 | 50.14 | 33.7 | 51.93 | 30.9 | 51.16 | 32.1 | 52.37 |
| 胫宽 Tibia width | 8.2 | 13.40 | 8.5 | 11.87 | 8.5 | 13.10 | 7.8 | 12.91 | 8.3 | 13.54 |
| 跗足长 Length of foot and tarsus | 45.2 | 73.86 | 52.0 | 72.63 | 45.3 | 69.80 | 43.3 | 71.69 | 47.4 | 77.32 |
| 足长 Foot length | 28.20 | 46.08 | 35.1 | 49.02 | 29.8 | 45.92 | 27.4 | 45.36 | 30.2 | 49.27 |

比率为身体各部位的量度与头体长之比。The ratio is the percentage of each measurement to snout-vent length.

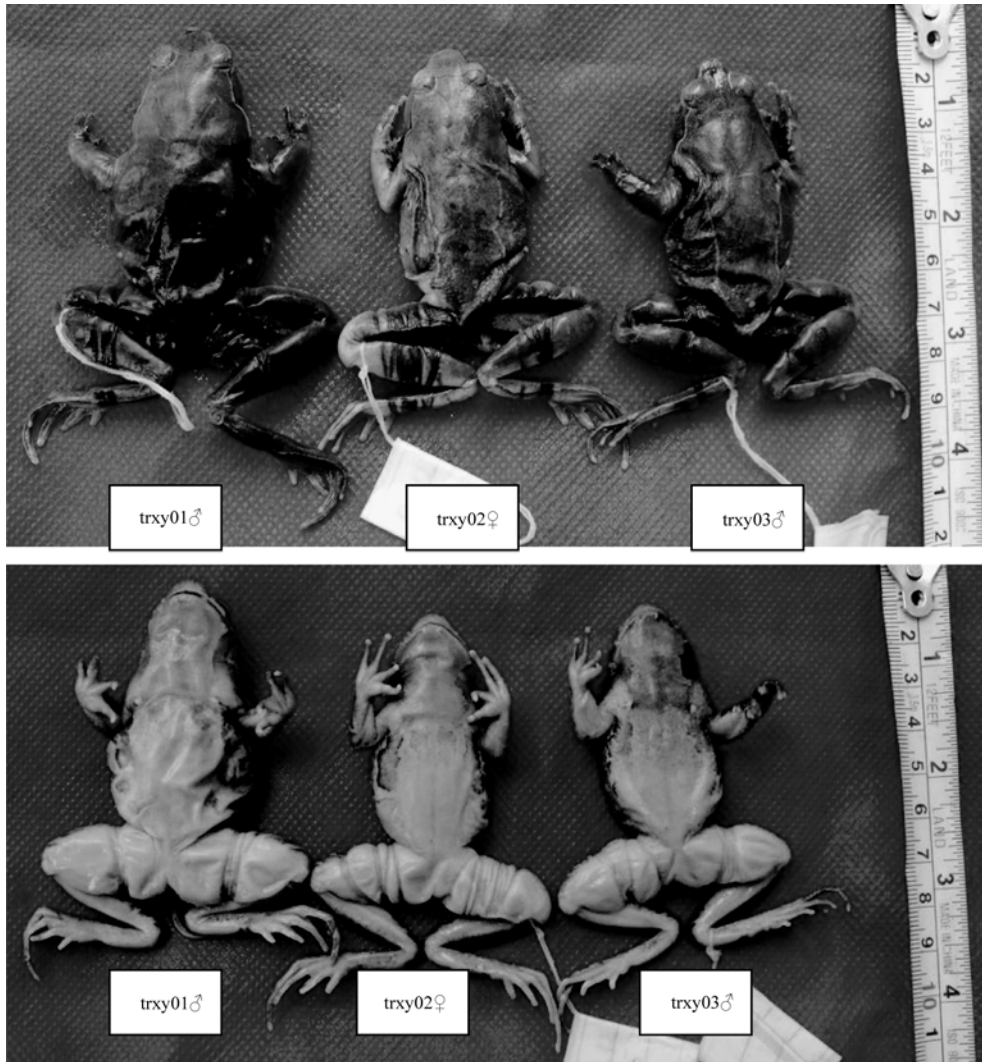


图 1 炳灵角蟾梵净山亚种(雄、雌,贵州梵净山)

Fig. 1 *Megophrys binlingensis fanjingmontis* (Male, Female, Mt. Fanjing Mountain in Guizhou Province)

A. 背面观;B. 腹面观。A. Dorsal view; B. Ventral view.

1 鉴别特征

本亚种与炳灵角蟾最为相似,表现为犁骨棱较弱,后端无犁骨齿,上颌有细齿;第一、二指上婚刺细密;趾侧缘膜窄;体腹面斑少,两侧黑褐色长形斑明显。与炳灵角蟾不同之处在于,本亚种体型较大,雄性头体长大于 60.00 mm,趾间具 1/3 蹼。而炳灵角蟾雄性体长较小,为 45.0 ~ 51.0 mm,趾基部具有蹼迹^[2]。

与棘指角蟾区别为:棘指角蟾第一、二指上婚刺粗大而疏;趾侧缘膜宽而明显,趾间半蹼;雄性体长为 47.2 ~ 54.4 mm;胸腹部有 10 多枚深色斑^[2]。本亚种的胸腹部有 5 ~ 7 枚深色斑,且体腹面中部无圆斑,其他区别见上。

峨眉角蟾犁骨棱强,后端有犁骨齿;体腹面中部深色斑多,两侧斑纹一般不呈条状;趾间呈现蹼迹;雄性头体长为 56.0 ~ 59.5 mm^[2],小于本亚种。

2 标本描述

此新亚种头体长平均为 (63.88 ± 4.65) mm ($n=5$), 其他部位量度数据见表 1。头扁平, 头宽大于头长, 吻部盾形, 吻端突出于下唇, 吻棱及吻端游离缘均成棱角状, 颊部垂直; 鼻孔在吻眼之间中部; 颞褶显著, 鼓膜呈卵圆形, 最大直径略大于它与眼后角的距离; 犁骨棱弱, 向后斜行, 后端无犁骨齿; 舌呈梨状, 后端微有缺刻。

指端钝圆略呈球状; 第一指较第二指略长; 第一指近端关节下瘤明显, 内掌突大, 为卵圆形, 外掌突小。后肢前伸贴体时跗关节达眼或略超过。径长略长于体长之半, 左右跟部略重叠; 足长短于径长, 趾扁平, 末端钝圆; 趾侧缘膜窄, 基部相连成 $1/3$ 蹼; 内侧 3 趾关节下瘤略显; 内蹼突卵圆形, 无外蹼突。

背面皮肤较光滑。背部和四肢上有细肤棱和细痣粒, 沿体侧散布着少量的圆疣; 背部自眼后方有“V”形细肤棱, 背侧自肩到胯部的细肤棱清晰; 上眼睑外侧有帘状肤褶, 无角状小突起; 颞褶钝角形, 后端达肩上方; 颞部疣粒不明显。腹部皮肤光滑, 体腹面中部斑纹少或无, 下唇缘正中有一对浅色疣粒; 胸侧有一对浅色圆疣。

两眼之间有一镶以浅色细边的三角形深褐色斑; 背部有“V”形深褐色斑纹; 上唇缘有 3~4

条深色纵纹, 颞部深褐色, 口角处的深色色斑达上臂内侧及胸侧; 股、胫背面各有 2~3 条细横纹。腹面咽喉部为灰棕色, 两侧和中央各有一条深色短纵纹, 胸腹部灰棕色, 腹部两侧有宽的深褐色纵纹。

3 分布与生态

炳灵角蟾由江建平于 1995 年采集于四川省洪雅炳灵地区^[2], 迄今为止, 未见在国外及国内其他省份分布的报道。

本亚种标本采集于贵州省梵净山黑湾河一带的小溪旁, 海拔约 900 m。梵净山是武陵山脉主峰, 海拔 500~2 570 m, 总面积 567 km², 位于黔东北江口、印江、松桃三县交界处, 地理坐标北纬 27°49'50"~28°1'30", 东经 108°45'55"~108°48'30"。它是我国亚热带森林生态系统保存较为完整的典型地区之一。

致谢 野外调查工作得到梵净山国家级自然保护区管理局的支持, 标本照片由铜仁学院生物科学与化学系高健强老师拍摄, 谨此一并致谢。

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