中国小豆螺属一新种描述*

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小豆螺是一种微小的淡水螺类，属于觸螺科 (Hydrobiidae)，小豆螺属(*Bythinella*)。该属首次报道于欧洲 (Ehrmann, 1933)[5]，后曾在日本发现[6,7,10,12]，近年又在我国湖南(刘月英等，1979)[1]、湖北(康在彬，1983)[3,4]等省发现。其中有些种类是并殖吸虫(*Paragonimus*)的第一中间宿主[2-4,8,9]，因此，引起了寄生虫学家和医学贝类学家的极大关注。本文报告小豆螺属一新种，定名为李氏小豆螺 (*Bythinella lii*, sp. nov.)。标本于1979—1983 年采自湖北省五峰县湾潭区之龙桥。模式标本保存在湖北医学院寄生虫学教研室医学贝类研究组。

李氏小豆螺 (新种)** ***Bythinella lii*, sp. nov.** (图 1-4)

形态描述 螺壳呈卵圆锥形(图1)，个体微小，壳质薄，半透明，淡黄白色。壳面光滑，但在解剖镜下观察，可见极细的生长线。螺层 4 层，每层均颇膨圆。壳顶小而钝。螺旋部矮，呈圆锥形。体螺层特别膨大，其高度约占全长的 2/3(68%)，体螺层下部非常弯圆与壳口下缘连成弧形。体螺层高度为螺旋部高度的 2.1 倍，体螺层宽度为倒二螺层(penultimate)宽度的 1.73 倍，壳口高为体螺层高度的 62%，壳宽与壳高之比为 1:1.68。缝合线深陷。脐孔小而明显。壳口大，卵圆形，口缘完整，具有褐色框边。内外唇均单薄，外唇弯圆，内唇略呈直线形，微向外翻，其中部贴覆于体螺层上。螺厣椭圆形，两端钝圆，长 0.789 毫米，宽 0.498 毫米，角质，较薄，半透明，淡黄色，厣核靠底偏内，具有48—50条微细的、排列紧密的、呈放射状的厣纹 (图 2)。

动物淡黄色。活动时触角甚细长，且不断地四向摆动；酒精固定标本触角则粗扁，基部宽，末端尖细，其长度总是比口吻长 (图 4)。眼点小，黑色，位于触角基部背侧稍偏外，两眼点间距离较宽。口吻宽短，前端中部微向内凹，口即在其下。外套膜薄，淡黄白色，半透明，外套缘光滑，无突起和缺刻。阴茎单一，无附属肢，位于颈部背侧偏右，由右向左盘曲于颈部，末端钝尖(图 4)。齿舌带状，长 0.678 毫米，宽 0.062 毫米。中央齿上缘有 7 个尖齿，中间 1 个较大，其下缘两侧各有 2 个基底齿；侧齿上缘有 8 个尖齿，第 4 个较大；内缘齿上有 25 个很细的尖齿；外缘齿上缘有 18 个尖齿。齿式为：$\frac{3\text{-}1\text{-}3}{2\text{-}2}$；3-1-4；25；18 (图 3)。

* 陈再元、田继寒两同志参加标本采集，张培喜同志摄制照片，文志英为插图覆墨，在此一并致谢。
** 本新种以李赋京教授的名字命名，以表敬意。
1983 年 8 月 30 日收到。

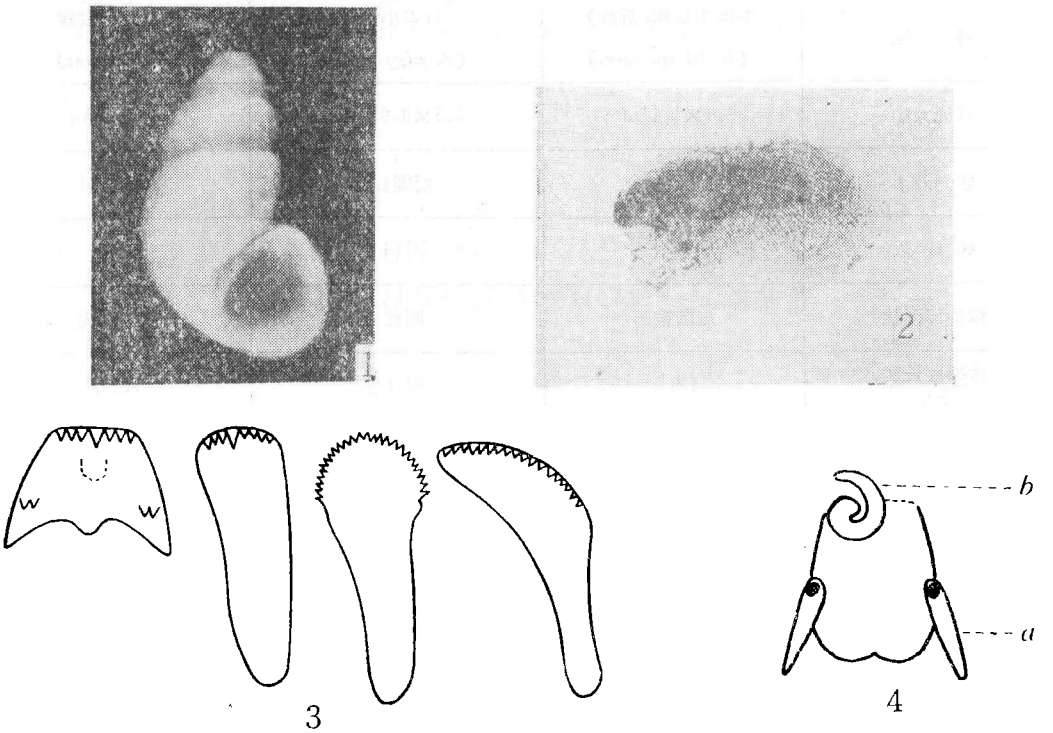

图 1—4　李氏小豆螺(新种) *Bythinella lii* Kang, sp. nov.
1. 螺壳(shell)(×17)；　2. 螺厣 (operculum)；　3. 齿舌 (radula)；　4. 头颈部,示触角(a)和阴茎 (b) [head and neck, showing tentacles (a) and penis (b)]

正模标本　壳高 2.4 毫米,壳宽 1.43 毫米;壳口高 1.01 毫米,壳口宽 0.84 毫米;体螺层长 1.63 毫米,螺旋部长 0.77 毫米。1979 年 7 月 15 日采自湖北省五峰县湾潭区之龙桥。

副模标本　壳高 2—2.43 毫米 (平均 2.268),壳宽 1.28—1.44 毫米 (平均 1.356); 壳口高 0.85—1.02 毫米(平均 0.978),壳口宽 0.71—0.86 毫米(平均 0.782);体螺层长 1.41—1.64 毫米(平均1.55),螺旋部长 0.59—0.78 毫米(平均 0.712)。1979 年 7 月 15 日及 1983 年 1 月 14 日采自上述地点。

栖息环境　本新种产于湖北省五峰县湾潭区湾潭乡龙桥大队二小队,系高山地区,海拔 1,100 米,但地势平坦而宽广,东边有高山,叫鱼泉山,山下有鱼泉洞,洞中有鱼,洞中泉水,终年潺潺长流,从不干涸。南边和西边亦有高山，西边山麓有一条从五峰通往鹤峰的公路,路旁有一条小河,叫湾潭河,河上有一石桥,名叫龙桥,桥的东边是一片平地,种植玉米和烟草等。本新种就孳生在这个山区平地上的一条小溪沟里，沟的起端有一三角形的水池,附近有住家,饮用此水。水从地下渗出,来源于鱼泉洞。水池中的水渗入小沟中,再流到湾潭河。小沟长约 200 米,沟宽 35—50 厘米,沟的两旁长有许多矮小的杂草,但不遮蔽阳光。沟底多细沙及小石块,沟中水量小而清凉,水流缓慢。李氏小豆螺附着在小石块的底面及侧面,而以底面为多。

讨论　本新种与日本小豆螺 (*Bythinella nipponica* Mori)[12]及洼田氏小豆螺(*Bythinella kubotai* Kuroda et Habe)[10]比较近似,但本新种外形为卵圆锥形,个体较大，内唇略呈直线形,体螺层基部周缘非常弯圆下降到壳口下端连成一弧形,以及齿舌公式，螺厣形状均与后两种不同。现将鉴别特征,列表如下:

特 征	李氏小豆螺(新种) (*B. lii* sp. nov.)	日本小豆螺 (*B. nipponica*)	洼田氏小豆螺 (*B. kubotai*)
螺壳大小	2.4×1.43mm	1.5×0.95mm	1.6×1.2mm
螺壳外形	卵圆锥形	短圆柱形	卵 圆 形
螺 层 数	4	4	$3\frac{3}{4}$
螺旋部形状	短圆锥形	圆柱形	帽 状
$\frac{\text{体螺层长度}}{\text{全长}}$	68%	67.6%	81.3%
壳宽:壳高	1:1.68	1:1.57	1:1.33
$\frac{\text{体螺层宽度}}{\text{倒二螺层宽度}}$	1.73	1.64	1.91
壳口大小	1.01×0.84mm	0.7×0.5mm	0.7×0.7mm
壳口形状	宽卵圆形	类圆形	圆 形
螺 唇	椭圆形,具有许多微细的。呈放射状的唇纹。	长椭圆形,具有同心圆状和放射状的唇纹,但不明显	与日本小豆螺的螺唇相似
中 央 齿	$\frac{3-1-3}{2-2}$	$\frac{4-1-4}{2-2}$	$\frac{5-1-5}{2-2}$
侧 齿	3-1-4	2-1-4	3-1-5

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DESCRIPTION OF A NEW SPECIES OF *BYTHINELLA* FROM CHINA

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In the present paper a new species of the genus *Bythinella* belonging to the family Hydrobiidae is described. The specimens of the new species were collected in 1979—1983 from Wufeng County of Hubei Province. The types are deposited in the Department of Parasitology, Hubei Medical College.

***Bythinella lii*, sp. nov.** (Figs. 1—4)

Description: Shell ovate-conoidal, minute, thin, translucent, dull white; smooth except for the very weak incremental lines. Whorls 4 in number, each of which well convex with a deeply constricted suture. Apex small but obtuse. Spire short and conic. Body whorl very large and inflated, the base of which strongly rounded, and descending to the aperture; it measures about two-thirds the length of the shell. Aperture large, roundly ovate; peristome continuous, simple, with a brownish margin; outer lip thin, roundly curved, inner lip more or less straight, slightly reflected outwards, and its middle portion attached to the body whorl. Umbilicus narrow but distinct. Operculum elliptical, rounded at both ends, 0.789 mm in length and 0.498 mm in breadth, corneous, thin, semitransparent, light yellow, paucispiral with excentric nucleus.

The animal is usually light yellow. The single tentacle on each side of the head in life is long and slender, slight swollen at the base and pointed at the end. In alcoholic specimens the tentacle is thick and flat, and its length is always longer than the snout. The small black eyes are situated at the dorsal side of the base of the tentacles. The proboscis is wide and short, and slightly bilobed in front where the mouth is located. The mantle is dull white, translucent, and its edge is smooth, without processes of any kind. The verge of the male is simple, slender and light yellow, and is coiled up at the back of neck near the right, and its end is bluntly pointed. The radula is band-form, 0.678 mm in length and 0.62 mm in breadth. The central tooth has 7 denticles on the free edge, of which the median is the larger. It also has two pairs of basals; its formula, therefore, is $\frac{3-1-3}{2-2}$. The lateral tooth has a large denticle and 3 lesser ones on the inside of this, and 4 on the outside. The inner marginal bears 25 denticles and the outer 18.

Holotype: Length 2.4 mm, breadth 1.43 mm; length of aperture 1.01 mm, breadth of aperture 0.84 mm; length of body whorl 1.63 mm; length of spire 0.77 mm; collected on July 15, 1979 at Longqiao Village, Wantan District, Wufeng County, Hubei Province, China.

Paratypes: Length 2—2.43 mm (average 2.268 mm), breadth 1.28—1.44 mm (average 1.356 mm); length of aperture 0.85—1.02 mm (average 0.978 mm), breadth of aperture 0.71—0.86 mm (average 0.782 mm); length of body whorl 1.41—1.64 mm (average 1.55 mm); length of spire 0.59—0.78 mm (average 0.712 mm); collected from the above-mentioned locality; 15 July 1979; 14 January 1983.

Habitat: The minute snails of the new species live in the small mountain ditches where the altitude is approximately 1100 meters above sea level. The sides of the ditches are overgrown with weeds. The bottom is full of sand and small stones. The water is little, cool and slowly-flowing. The snails were attached to the underside and flank of the small stones, with the majorty to the underside.

Etymology: This new species is named in honor of Prof. F. C. Li, the famous Chinese anatomist, one of the early workers of *Oncomelania* in China.

Key words: Mollusca, gastropoda, hydrobiidae, *Bythinella*, freshwater snails, new species