

## Subfamily BOLBOLAIMINAE **subfam.n.**

*Diagnosis.* Microlaimidae. Body length 1–2 mm. Cuticle annulate, sometimes ornamented with dots. Second and third crowns of cephalic sense organs setose or small, but then stout, cephalic setae close to front end. Buccal cavity strongly sclerotized, denticles may be present. Pharyngeal bulb present, terminal bulb of oesophagus large and oval. Excretory pore at level of or posterior to nerve ring. Copulatory apparatus strongly sclerotized, usually with gubernacular apophyses directed dorsally to dorsocaudally.

Type genus: *Bolbolaimus* Cobb, 1920

*Remarks.* In the strong sclerotization of the buccal cavity, the shape of the oesophagus and sclerotization of its lumen, and the sclerotization of the copulatory apparatus, this subfamily provides a link between the Microlaimidae and the Desmodoridae. *Bolbolaimus* is the only known genus.

### *Bolbolaimus* Cobb, 1920

syn. *Pseudomicrolaimus* Sergeeva, 1976 **syn.n.**

Type species: *Bolbolaimus pellucidus* Cobb, 1920

*Remarks.* I do not agree with Luc & De Coninck (1959), who synonymized *Bolbolaimus* with *Chromaspirina* Filipjev, 1918. Neither the stout cephalic sense organs, the structure of the buccal cavity nor the gubernaculum of the type species *B. pellucidus* are significant features for such a synonymization. The characters of the female reproductive system, cuticular ornamentation, buccal cavity and oesophagus indicate that *Bolbolaimus* should be eliminated from the Spiriniidae and included in the Microlaimidae with affinities to the Desmodoridae (see above).

Sergeeva (1976) established the genus *Pseudomicrolaimus* (type species *P. murinae* Sergeeva, 1976) within the Microlaiminae; unfortunately she only compared its characters with those of *Microlaimus*, but it agrees in all respects with *Bolbolaimus*. The two genera are congeneric, and *Pseudomicrolaimus* is thus a junior synonym of *Bolbolaimus*.

The following *Microlaimus* species are transferred to *Bolbolaimus* because the structure of the buccal cavity and oesophagus, the type of cuticular ornamentation and the degree of sclerotization of the copulatory apparatus: *M. chitwoodi*, *M. crassiceps*, *M. teutonicus* and *M. wieseri*. ?*Bolbolaimus* sp. described by Riemann 1966 is for the same reasons included in the genus; I propose the new name *Bolbolaimus riemanni* nom.nov.

The very short descriptions of *B. amabilis* De Man (1922, p. 117) and *B. cobbi* Chitwood (1937 (1938), fig. 61E–F) do not provide sufficient information to distinguish them from the other members of the genus; they are regarded as species inquirendae.

### Key to the species of *Bolbolaimus*

1. Cephalic sense organs stout; cuticle differentiated laterally

*B. pellucidus* Cobb, 1920

- Cephalic sense organs setose; cuticle not differentiated laterally 2
- 2. Cuticle annulate and without ornamentation 3
- Cuticle annulate and with ornamentation as dots or longitudinal bars 8
- 3. Buccal cavity without denticles 4
- Buccal cavity with denticles 6
- 4. Amphids 33% of head diameter, situated behind cephalic setae: tail 2×anal diameter
- B. wieseri* (Hopper, 1961) **comb.n.**, syn. *Microilaimus wieseri* Hopper, 1961
- Amphids ca. 50% of head diameter, situated between cephalic setae; tail ca. 4×anal diameter 5
- 5. Cephalic setae 1/6×head diameter
- B. chitwoodi* (Gerlach, 1950) **comb.n.**, syn. *Microilaimus chitwoodi* Gerlach, 1950
- Cephalic setae ca. 1/3×head diameter
- B. crassiceps* (Gerlach, 1953) **comb.n.**, syn. *Microilaimus crassiceps* Gerlach, 1953
- 6. Buccal cavity with two rows of denticles
- B. denticulatus* Cobb, 1920
- Buccal cavity with an area of denticles 7
- 7. Buccal cavity with one large dorsal tooth at the dorsal margin
- B. dentatus* (Allgén, 1935) **comb.n.**, syn. *Pseudomicrolaimus dentatus* (Allgén, 1935)
- Buccal cavity with two large teeth at the dorsal margin.
- B. murinae* (Sergeeva, 1976) **comb.n.**, syn. *Pseudomicrolaimus murinae* Sergeeva, 1976
- 8. Buccal cavity without denticles 9
- Buccal cavity with denticles *B. punctatus* Cobb, 1920
- 9. Spicules 1.2×anal diameter; gubernaculum slender sticklike with a joint line (apophysis ?)
- *B. teutonicus* (Riemann, 1966) **comb.n.**, syn. *Microilaimus teutonicus* Riemann, 1966
- Spicules 0.8×anal diameter; gubernaculum short, surrounding the spicules and with dorsally directed apophyses
- B. riemanni* **nom.nov.**, syn. ?*Bolbolaimus* sp., see Riemann, 1966