

## DISCUSSION

Representatives of the Eurystomininae are relatively infrequently reported, poorly known and show a high degree of infra-generic variation. The group clearly needs considerable revision based on more hard data, but we present at this stage some salient points in the hope of promoting discussion and further investigation.

Male specimens are critical to a taxonomic analysis of the group (Inglis, 1962). Indeed, an important division of the Enchelidiidae into the subfamilies Eurystomininae and Enchelidiinae is based on the sexual dimorphism of the latter-hence the confusion that exists between *Belbolla* and *Polygastrophora*. This being so, we consider all taxa of the Eurystomininae described without a male as *species dubiae* and for convenience we list below those species not previously so designated.

Gerlach and Riemann (1974) erected a new subfamily Thoonchinae for the genera *Ditlevsenella* and *Thoonchus*, due to the greater resemblance these bear to the Oncholaimidae than other genera (Riemann, pers. comm.): they lack precloacal cuticularised supplements and possess a more oncholaimid arrangement of the buccal armature. However, in that the presence or absence of supplements is currently accepted as a variable infrageneric character among the Eurystomininae (cf *Belbolla*) and that species can be transferred from *Ditlevsenella* to other genera on the basis of a single character (cf *Eurystomina cassiterides* (Warwick, 1977) comb. nov.: see below), perhaps there may not be a significant discontinuity between *Ditlevsenella-Thoonchus* and the others. Therefore, we would question whether the erection of this new subfamily is not rather premature.

*Lyrinema* Timm, 1961 and *Megaeurystomina* Luc and De Coninck, 1959 are both represented by single species possessing unusual characters making their systematic position uncertain. Since males are unknown in these genera, we consider them doubtful.

*Belbolla* Andrassy, 1973 is a heterogeneous grouping of species having in common the possession of multiple oesophageal bulbs while *Ledovitia* Filipjev, 1927 and *Thoonchus* Cobb, 1920 are rather poorly known genera, existing descriptions of which do not always indicate the status of salient generic characters.

*Ditlevsenella* Filipjev, 1927 is represented by two valid species lacking denticles and cuticularised supplements but apparently differing in the position of the longest tooth (Hopper, 1963; Riemann, 1966). *Ditlevsenella cassiterides* Warwick, 1977 was re-examined using differential interference contrast microscopy, which showed denticles present in the buccal cavity, so the species is transferred to *Eurystomina*. This discovery perhaps highlights the difficulties inherent in attempting to evaluate descriptions of species not supported by type specimens.

*Eurystomina* Filipjev, 1921 represented by several species having rows of buccal denticles, cuticularised precloacal supplements and functional caudal glands, is the most well known of the genera. Inglis (1962) considered the gubernaculum shape of great importance in distinguishing species, but more recent analyses have allowed of a greater degree of variation (Wieser and Hopper, 1967; Yeates, 1967). If, as Inglis (1962, p. 252) himself points out in discussing the precloacal supplements, some degree of artistic licence can be attributed to rather weak early descriptions, then this argument can presumably be extended to the gubernaculum and other structures. (Therefore, perhaps the status of *E. spectabilis* (Marian, 1870), *E. tenuis* (Marian, 1870) and *E. filiformis* (De Man, 1888) as separable from *E. ornata*

(Eberth, 1863) should now be questioned. We would suggest that these taxa should be treated as a single species-complex pending further evidence, rather than following Inglis' (1962) views. Likewise, Inglis' (1962) renaming of Chitwood's (1951) redescription of *E. americana* Chitwood, 1936 as *E. chitwoodi* should be rejected, as indicated by Wieser and Hopper (1967).

The validity of many other *Eurystomina* species have been questioned by Wieser (1953) and Inglis (1962) mainly on the grounds of inadequate description. We support these opinions and suggest that those considered *species inquirendae* and *species incertae sedis* by these authors be treated as *species dubiae*. To this list we would add *E. abyssalis* Micoletzky, 1930 (female only) and *E. tenuicaudata* Allgen, 1962 (inadequate description) which Inglis (1962) accepted as valid.

*Pareurystomina* Micoletzky, 1930 is distinguished by the presence of buccal denticles, absence of caudal glands and a conical tail with a needle-point tip. The value of flattened cervical setae as a consistent generic character (Hopper, 1970) has yet to be substantiated. Blome (1974) recently redescribed *P. acuminata* (De Man, 1889) but made no mention of flattened setae. Wieser (1959) described two species, *P. pugatensis* and *Eurystomina repanda*, which were similar in overall dimensions, shape of male genital apparatus, general organisation of the buccal cavity and possession of flattened cervical setae but differed only in tail shape. Since Wieser (pers. comm.) maintains that the material was not well preserved (and has subsequently been lost) it is conceivable that the tail tip of *E. repanda* had broken off and the two species are synonymous, minor differences being attributable to intraspecific variation or age. *P. tenuicaudata* Stekhoven, 1950 was poorly described and important information on the buccal cavity is wanting. Wieser (1959) questions the inclusion of the species in *Pareurystomina*: we consider it dubious.

TABLE 1

Tabular key to the genera of the Eurystomininae.

| Character                            | Genus                    |                  |                      |                    |                             |                       |                   |
|--------------------------------------|--------------------------|------------------|----------------------|--------------------|-----------------------------|-----------------------|-------------------|
|                                      | <i>Bathyeurystomina</i>  | <i>Belbolla</i>  | <i>Ditlevsenella</i> | <i>Eurystomina</i> | <i>Ledovitia</i>            | <i>Pareurystomina</i> | <i>Thoanichus</i> |
| Rows of denticles                    | 1 (band)                 | —                | —                    | 1-5                | 1                           | 2-5                   | 4-6 irregular     |
| Oesophagus bulbs                     | —                        | 7-10             | —                    | —                  | —                           | —                     | —                 |
| Cervical setae                       | short                    | short or long    | short                | short              | long                        | short                 | short             |
| Cuticularised precloacal supplements | 2                        | 0-3              | 0                    | 2                  | 2                           | 2                     | 0                 |
| Caudal glands                        | —                        | +                | +                    | +                  | +                           | —                     | +                 |
| Tail shape                           | posterior 3/4 flagellate | elongate conical | short conical        | short conical      | long conical or cylindrical | conical sharp tip     | short cylindrical |

Reviews based primarily on the available literature are clearly rather unsatisfactory, a point made by Inglis (1962). However, we hope that the nomenclatural alterations suggested here will help clear the ground for a more thorough revision of this complex and heterogeneous group based on hard data. In the interim, we present the following tabular key to the valid genera of the Eurystominae.

### Summary of proposed changes

- Bathyeurystomina valeriae* = new genus and species.  
*B. rockallensis* = new species.  
*Lyranema* Timm, 1961 = genus dubius.  
*Megaeurystomina* Luc and De Coninck, 1959 = genus dubius.  
*Ditlevsenella cassiterides* Warwick, 1977 = *Eurystomina cassiterides* (Warwick, 1977) comb. nov.  
*Eurystomina filiformis* (De Man, 1888) = *E. ornata* (Eberth, 1863) syn. nov.  
*E. spectabilis* (Marian, 1870) = *E. ornata* (Eberth, 1863) syn. nov.  
*E. tenuis* (Marian, 1870) = *E. ornata* (Eberth, 1863) syn. nov.  
*E. chitwoodi* Inglis, 1962 = *E. americana* Chitwood, 1936 syn. nov.  
*E. repanda* Wieser, 1959 = *Pareurystomina pugatensis* Wieser, 1959 syn. nov.  
*Pareurystomina tenuicaudata* Stekhoven, 1950 = species dubia.

### List of species considered dubious on the grounds of being described without males

- Ditlevsenella filipjevi* Hopper, 1963.  
*D. tertia* Wieser, 1953.  
*Eurystomina abyssalis* Micoletzky, 1930.  
*E. bilineata* Wieser, 1953.  
*Ledovitia longiseta* (Micoletzky, 1930).  
*L. profunda* (Micoletzky, 1930).  
*L. simplex* Kreis, 1963.  
*Lyranema speciosum* Timm, 1961.  
*Megaeurystomina combensi* Luc and De Coninck, 1959.  
*Pareurystomina armorica* Luc and De Coninck, 1959.  
*P. filicaudata* Allgen, 1934.  
*P. flagellicaudata* Stekhoven, 1946.  
*P. micoletskyii* Filipjev, 1946.  
*P. parapugetensis* Vitiello, 1970.