Identification of the species of rotifers with thin loricas requires examination of the structure of the mastax. The individual parts are made distinguishable by using Javel water, a 10% solution of KOH saturated with chloride, or more rarely a strong soda solution.

**Key to orders and families of the class Eurotatoria (Phylum Rotifera)**

1(4) Mastax malleate (Pl. I, Figs. 3-6) (Brachionidae) or malleate-like (Proalidae). Uncus plates with several teeth. Manubria with three clearly expressed chambers. Rami with well-developed chambers, narrowing anteriorly. Fulcrum short or long. ........ order Transversiramida, families Brachionidae and Proalidae

2(3) Body with hard integument (lorica). Mastax malleate. ........ family Brachionidae

3(2) Body with more or less soft integument. Mastax malleate-like. ........ family Proalidae

Body elongate, spindle-like. Foot long or short with two toes. Mastax very small with elements of malleate and virgate (long manubria) forms (see illustrations p. 12). Body elongate, spindle-shaped, thin. Foot very long, about ⅛ of the total length extending into body. Toes lanceolate. Rami asymmetrical, broadly triangular, short, with one or two blunt teeth on the inner edge. Fulcrum short. Ucki with four to five club-like teeth. Manubria long, thin, and bent at ends. ........ genus Proales, P. reinhardti (Ehrenberg, 1834) (Pl. III, Figs. 1-6; Pl. VII)

Synonymy: Fucularia reinhardti Ehrenberg, 1834.
Length 200-380 µm, toes 20-28 µm, mastax 30-45 µm, rami 9-12 µm, fulcrum 6 µm, unci 12-14 µm, manubria 24-25 µm.
Length of males 150-155 µm (De Smet 1996).
Panoeanic. Barents and Laptev seas.

4(1) Mastax virgate or forcipate (see illustrations p. 10)

5(6) Mastax virgate. Ucki plate-like. Fulcrum and manubria long, Muscular hypophasyrgyal cord well-developed. Some trophi are asymmetrical (Trichocerca). ........ order Saeptiramida, families Synchaetidae and Trichocercidae

6(5) Mastax forcipate. Ucki club-shaped with one developed tooth. Rami large, chelate-shaped, with or without teeth on the inner edges. Fulcrum often laminar. A small intramalleal plate is commonly present between the unci and manubrium. ........ order Astrotuiramida, family Dicranophoridae

**Key to genera and species of the family Brachionidae (order Transversiramida)**

1(2) Body lorica wide or like elongate oval. Anterior dorsal edge of lorica with six pairs of ventrally bent spines, with largest spines in middle. Posterior and lateral edges more or less rounded, always lacking spines. Surface of lorica with sculpturing. A medial, longitudinal keel runs from the anterior frontal facet, transecting three transverse ribs. Posterior edge with three lateral facets. Alveoli sculpturing more or less expressed. ........ genus Keratella, K. cruciformis (Thompson, 1892) (Pl. II, Figs. 1-3)

Synonymy: Anuraea cruciformis Thompson, 1892.
Atlantic widespread boreal Arctic.
Typical form (length of lorica 128-203 µm, width 83-155 µm, ratio of length to width of lorica 1.4) found in brackish water with 23-30 ppt salinity. Found in the plankton of the White, Barents, and Laptev seas.

K. cruciformis wirkerti (Kutikova, 1970) (length of lorica 164-174 µm, width 94-102 µm, ratio of length to width of lorica about 1.8) found in the coastal waters of the southeastern Laptev Sea.

K. cruciformis eichwaldi (Levander, 1894) (length of lorica 139-168 µm, width 83-105 µm, ratio of length to width 1.5), known from the White Sea and estuarine arctic waters, as with the typical form.

2(1) Lorica of body elongate. Anterior dorsal edge of lorica with four to six nearly triangular spines. Posterior and lateral edges of lorica round, sometimes with spines. Surface of lorica with longitudinal cutting, furrows, or alveoli-like sculpturing. ........ genus Notholca