THE UBIQUITOUS TELSON AND THE DECEPTIVE FURCA

BY

HORST KURT SCHMINKE
Zoologisches Institut der Universität, Kiel, Germany, F.R.G.

1. INTRODUCTION

The most posterior segment of the abdomen of crustaceans is known as the telson. Debate as to its true nature has flared up again recently. Bowman (1971) pointed out that in different crustaceans we are faced with two kinds of telson which in his opinion are not homologous.

On the one hand there is a telson “having caudal rami and a terminal anus” (p. 165). According to Sharov (1966) this type of telson should not be called telson at all but rather be regarded as the terminal body somite. Bowman agrees with this opinion and in his paper refers to this kind of telson as the anal somite and to the caudal rami as uropods.

On the other hand there is a telson “without caudal rami and with the anus opening on the anteroventral surface” (p. 165). Bowman regards this type as the true telson and suggests that it “may have been derived from a simple dorsal anal flap or operculum, such as that found in some copepods” (p. 165). Thus, a telson never has appendages and the anus never opens terminally on it.

In his paper Bowman then passes in review the various groups of crustaceans in order to exemplify his concept. On his way he has to eradicate a few generally accepted views, e.g., that every crustacean has a telson or that the abdomen of Nebalia is made up of 7 somites plus a telson, etc.

Yet, looking a little closer one discovers inconsistencies which demand comment. Bowman’s interpretation of the caudal region of the Bathynellacea is especially debatable and his notions are incompatible with facts as regards the telson of the Stygocarididae and the Thermosbaenacea.

2. THE TELSON

The Bathynellacea bear, articulated on the dorsal side of the sixth abdominal somite, a pair of short, slightly flattened appendages (figs. 1-4). These are armed with spines along the inner and terminal margin and are short in the Bathynellidae and more elongated in the Parabathynellidae. Their nature has been variously interpreted.

Sharov (1966) and Bowman (1971) assume that they are the two halves of a
Figs. 1-7. Caudal regions of some Malacostraca. 1, Bathynellidae: pleotelson of *Nannobathynella africana* Schminke & Wells, dorsal view (after Schminke & Wells, 1974); 2, Pleotelson of same species, lateral view; 3, Parabathynellidae: pleotelson of *Hexabathynella halophila* Schminke, dorsal view (after Schminke, 1972); 4, Pleotelson of same species as in 3, lateral view; 5, Stygocarididae: pleotelson of an undescribed species from New Zealand, dorsal view, without uropods; 6, Pleotelson of same species as in 5, lateral view; 7, Pleon of *Thermostaena mirabilis* Monod (after Monod, 1940).