ANTENNAL SCALE LENGTH AS A MEASURE OF RELATIVE SIZE IN THE OPOSSUM SHRIMP, *MYSIS RELICTA* LOVÉN 1)

BY

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INTRODUCTION

The opossum shrimp, *Mysis relict*ú Lovén, commonly flexes its abdomen when placed in preservatives making total length measurements impractical. In addition, total length measurements of mysid exuvia are unreliable due to their fragile nature and the characteristic split in the exoskeleton immediately posterior to the carapace during ecydysis. Even consistency among total length definitions is lacking. Holmquist (1959) refers to total length as body length, which she defines as the distance from the apex of the rostrum to the apices of the telson. This definition of total length was used in studies by Teraguchi (unpublished), McWilliam (unpublished), Reynolds & DeGraeve (1972), and Carpenter et al. (1974). Clutter & Theilacker (1971) and Amaratunga & Corey (1975) used a different measure of body length that may be referred to as standard length, and Clutter & Theilacker (1971) defined this as the distance from the end of the last abdominal segment (base of uropod) to the anterior edge of the carapace. The term total length was used without definition by Juday & Birge (1927), Larkin (1948), Lasenby & Langford (1972), and Dadswell (1975).

Amaratunga & Corey (1975) constructed length/frequency histograms for *Mysis stenolepis* based on carapace length measurements which they consider more reliable than total length measurements. They measured carapace length from the anterior edge of the carapace, behind the insertion of the eyestalk, to the median dorsal posterior edge. Clutter & Theilacker (1971) also considered total length unreliable, but they chose the exopod of the uropod as a more reliable measure and reported a linear relationship of this feature with total length. In addition to using Holmquist’s (1959) definition of total length, Teraguchi (unpublished) used the antennal scale (exopodite of the second antenna) as a more reliable measure of

body size. However, Teraguchi did not establish the relationship between total length and antennal scale length nor between standard length and antennal scale length for *Mysis relicta*. The present study investigated both of these relationships in an effort to facilitate conversions from one of these measures to another.

**METHODS**

Total length or standard length of *Mysis relicta* was measured, whenever feasible, with an ocular micrometer mounted in a dissecting microscope. When the length

![Diagram](image)

**Fig. 1.** Relationship between standard length and antennal scale length of *Mysis relicta* Lovén in Lake Michigan.