

Life History of the Marine Isopod *Cyathura polita* in the Saint John River Estuary, New Brunswick: a Species at the Northern Extent of its Range

SARAH C. MERCER¹, GLENYS D. GIBSON², and MICHAEL J. DADSWELL³

Department of Biology, Acadia University, Wolfville, Nova Scotia B4P 2R6 Canada

¹sarah_mercer9@hotmail.com

²glenys.gibson@acadiau.ca

³Corresponding author. Email: mdadswell@bwr.eastlink.ca Phone: (902) 585-1161. Fax: (902) 585-1059

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The marine isopod, *Cyathura polita*, inhabits estuaries on the east coast of North America from the Gulf of Mexico to the Bay of Fundy, Canada. We studied *C. polita* in the Saint John estuary to test for potential differences in life history that might occur because of the northern location of the population. In the Saint John, based on our interpretation from a six-month sampling program (May–October), the population exhibits a three-year life cycle, one year longer than more southern populations, and stretching over four summers. Our study supported the occurrence of protogynic hermaphroditism. After two summers as juveniles, individuals matured as females during their third summer, then displayed sex reversal by becoming males that fall, and finally reproducing as males in their fourth summer of life before death. Mean length of *C. polita* from the Saint John was greater than individuals from more southern populations (females, 13.8 ± 2.14 mm; males, 16.3 ± 2.41 mm). Annual brood release occurred in late July–early August. Mean fecundity of females was 53.2 ± 18.9 embryos per brood, which was greater than found in southern populations. *Cyathura polita* is rare in Canada and is known only from the Saint John and along the northern shore of the Bay of Fundy to the border of the United States.

Key Words: Isopod, *Cyathura politica*, growth, reproductive cycle, fecundity, protogynic hermaphroditism, status, St. John River, New Brunswick.