Phylogeny of five species of *Anilocra* Leach 1818 (Isopoda: Cymothoidae) from Puerto Rico and the Virgin Islands

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Members of the genus *Anilocra* Leach 1818 are large external isopod parasites of a variety of coral reef and other habitat-associated fishes. In the Caribbean Sea, this genus is represented by nine species whose descriptions are based solely on their morphology. Their disjunct geographic distributions and host specificity suggest varying degrees of incipient speciation. This study used mitochondrial cytochrome c oxidase subunit 1 gene sequences to elucidate phylogenetic relationships of five species of *Anilocra* from Puerto Rico and the Virgin Islands through parsimony, maximum likelihood, and Bayesian inference. The results show that the Caribbean *Anilocra* species form a monophyletic group and are not closely related to *Anilocra physodes* from the Mediterranean Sea, the type species of the genus. Parsimony and Bayesian inference analyses recovered three clades: clade A (*A. chromis*), clade B *(A. holocentr*i), and clade C (*A. acanthuri, A. chaetodonti, A. haemuli*), while maximum likelihood analyses only recovered clade A and C. These analyses depict *A. chromis* as the basal species and *A. chaetodontis* as the most recently evolved species of the Caribbean *Anilocra*. Phylogenetic reconstructions show population structure based on host for *A. haemuli* and based on geographical location for *A. chaetodontis*, which suggest that each of these species might represent cryptic species with morphological stasis.