

学 位 論 文 要 旨	
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題 目	Studies on the distribution pattern of native Atyid shrimps, and on the taxonomy and life history of invasive Atyid shrimp from Sotobo region, Boso Peninsula, Chiba Prefecture, eastern Japan (千葉県外房地域における在来ヌマエビ類の分布様式と外来ヌマエビの分類学および生活史に関する研究)
<p>In this study, the primary objective is to clarify the formation process and factors of the distribution pattern of native Atyid shrimps in the river of Sotobo region, Boso Peninsula, Chiba Prefecture, eastern Japan. The second objective is to provide knowledge as to what kind of future change can occur in fauna of Atyid shrimps and the distribution pattern of native Atyid shrimps in Sotobo region when global warming progresses. For these purposes, the author examined the formation process of the distribution pattern of native Atyid shrimps from the three viewpoints of wide scale, channel scale and point scale. In the comprehensive consideration, the author considered how the distribution pattern of the native Atyid shrimps are formed in the rivers of Sotobo region. In addition, I conducted a taxonomic study on invasive shrimp <i>Neocaridina</i> sp. found in Sotobo region and considered the possibility that its invasion might affect the distribution of native Atyid species in Sotobo region.</p> <p>It was considered that the distribution pattern of native Atyid shrimps in Sotobo region on the channel scale is determined based on 1) life history characteristics (migration or landlocked), 2) environmental directivity at the point scales and habitat size caused by the channel scale, and 3) the distribution characteristics on the wide scale (Indo - Pacific species, Kuroshio species, Temperate species).</p> <p>If the global warming progresses relatively moderately in Sotobo region, the main habitat area of the Indo - Pacific species group may expand to the high latitude area. As a result, the reproductive process will be started earlier and the subscription resource amount may increase. Therefore, it is expected that the distribution area of the Indo - Pacific species group will expand in rivers of Sotobo region. If rapid warming progresses, the main habitat area of the Indo - Pacific species will expand to Sotobo region, and the Indo - Pacific species will replace with the Kuroshio species and it may become the main species in Sotobo region. In this case, it was assumed that the distribution pattern on the channel scale in Sotobo region would change to the similar distribution pattern of Atyid shrimps currently found in small rivers in Ryukyu Islands.</p> <p><i>Neocaridina</i> sp. confirmed in Sotobo region was found to be <i>Neocaridina davidi</i> (Bouvier, 1904), native to mainland China, from a study based on the morphological characteristics and mitochondrial DNA information. The life history of <i>N. davidi</i> is very similar to that of a congeneric species, <i>N. denticulata</i> (De Haan, 1844). As for the influence of the invasion of <i>N. davidi</i> in Sotobo region on the distribution area on the channel scale of the native species, it was inferred that <i>N. davidi</i> will replace with native landlocked species and the distribution area in the native migratory species may be reduced.</p>	