

(抄録)

バフンウニ種苗生産時に発生する棘抜け症防除に関する研究

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Studies on the Preventive Measure against Winter Spine-detached Disease (Togenukesyo) in rearing of sea urchin *Hemicentrotus pulcherrimus*

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Journal of Fisheries Techology (2015), 8(1):1-8

バフンウニ種苗生産において、低水温時に大量死を起こし、種苗量産の障壁となっている棘抜け症の防除方法を確立するため、罹病バフンウニから単離された細菌TG-1株の分類学的位置、病原性および増殖温度を検討した。TG-1株は、16SrRNA塩基配列の相同性解析から *Oleispira* 属細菌あるいはその近縁種と考えられ、バフンウニに病原性を示し、20°C以上の温度で菌塊を形成して増殖力が低下することが判明した。バフンウニ種苗生産事例の解析結果から、20°C以上の飼育水加温で被害軽減できることが示唆された。また、紫外線照射海水による飼育も、原因菌の侵入防止に有効と思われる。

To establish preventive measures against Togenukesyo, a disease that causes massmortality of juvenile *Hemicentrotus pulcherrimus* when the temperature of sea water is low and that is a barrier to the mass production of juveniles, the taxonomic position and pathogenicity of a causal bacterium, the TG-1 strain, which was isolated from diseased animals, and the temperature at which the strain grows were investigated. Homology search of the 16S rRNA gene showed that the TG-1 strain could be considered to be a bacterium of the genus *Oleispira* or a related species. The TG-1 strain was found to be pathogenic to *Hemicentrotus pulcherrimus* and to form bacterial clumps, which resulted in decline in the growth ability, when the temperature was 20°C or higher. Analysis of previous cases of culture of juvenile *Hemicentrotus pulcherrimus* suggested that damage by the disease can be mitigated by raising the temperature of the culture water to 20°C or higher. Culture in UV-irradiated sea water is also considered to be effective in preventing the entry of the causal bacterium.