

## 外部発表業績

### アメリカオオアイカの利用技術—揚げ蒲鉾への対応

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#### 抄 録

アメリカオオアイカの異味及び加熱による収縮・変形を克服するために、すり身化技術を検討し、さらにその加工品として揚げ蒲鉾を試作した。すり身は、解凍後の試料をサイレントカッターで粉碎し、異味除去を兼ねて水晒し後、回転筒とコンベアの回転数の組み合わせを3,400rpmと2,300rpm および3,600rpmと2,600rpmとしたデカンターを用いて脱水処理し、良好なすり身を回収することができた。ただ、破碎時間が長くなるにつれて回収率が低下することから破碎処理は20eec程度が適当と考えられた。

揚げ蒲鉾作製に用いた原料のアンモニア量は245mg/100gで、すり身回収後46mg/100gと減少し、タラすり身との混合及び油ちょう処理により、11~17mg/100gと軽減された。この試作品のレオメーターによる物性測定では、タラすり身40%以上混合することにより良好な結果が得られた。さらにアメリカオオアイカ50%使用すり身の揚げ蒲鉾試食を実施したところ有効回答(137)中85%が異味を感じることなく、イカの風味を感じない人は35%であった。

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Post-settlement observations of ezo abalone, *Haliotis discus hannai*,  
in conjunction with natural flora.

Ryo Sasaki

(4<sup>th</sup> international abalone symposium, University of Cape Town)

Natural spat settlements of ezo abalone were examined at various sites of Miyagi coasts. Averaged density was recorded 220 inds/m<sup>2</sup> with 510±40µm shell length along the sea bottom from 150m (5m depth) to 200m (7m depth) distance from the shore. Daily mortality and growth rate were calculated 13% and 30-40µm respectively within a month after settlement. In some cases, dead shells of ca.500µm length were found in the samples from crustose coralline boulders, which were regarded as first critical size caused by a starvation. Juveniles were dominantly distributed around the depth layer of 5-6m at exposed sites and 1-2m at sheltered sites, which were accordant to the lowest distribution of *Eisenia*. Appearance of 1 year old abalone was divided into 6% at *Eisenia* forests, 49% at boundary zone and 25% at crustose coralline flats. In conjunction with natural flora, boundary zone between *Eisenia* forests and crustose coralline flats is considered to be a substantial sites for larval settlement and spat on-growing.

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Spatial and temporal distribution on benthic animals below coho salmon culture pen.

Ryo Sasaki and Akio Oshino

(4<sup>th</sup> Japan-Korea Joint Symposium on Aquaculture, Tohoku University)

Ecosystem on the distribution of benthic animals was examined by diving observation in conjunction with organic enrichment below coho salmon culture pen at Onagawa Bay in 1990s. COD and TS values as the organic indicators of the enriched sediments were measured 300mg/gdry and 2mg/gdry in summer. Dominant species of macrobenthos dredged by diving were identified *Nebalia bipes*, *Melita* sp.(Crustacean), *Schistomeringos japonica*, *S. ceaca*, *Capitella* spp.(Polychaete), and *Theora lata*(Bivalve) etc. Concerning the environmental viewpoint for these animal distributions, assembling sites of each macrobenthos were correlated to the marginal zone of enriched sediment at each season. According to synchronous patterns of the distribution between macrobenthos and sediment properties below fish culture pen, biological activities so-called bioturbation such as feeding, gardening etc by macrobenthos were recognized for a key factor in preventing self-induced deterioration of fish-farming.

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