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紀伊半島南西岸におけるイサキ *Parapristipoma trilineatum* の年齢と成長

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**Age and growth of threeline grunt, *Parapristipoma trilineatum*, along the southwestern coast of Kii Peninsula, Japan**

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**摘 要**

耳石観察をもとに紀伊半島南西岸産イサキの年齢と成長の関係を調べた。耳石輪紋は年に1回形成され、その時期は産卵盛期にほぼ一致した。表面法と横断面法を用いたところ、表面法による年齢査定結果は、3歳以上の個体においてしばしば過小評価であり、その程度は高年齢になるほど大きくなった。横断面法の査定結果にもとづく雌雄込みの von Bertalanffy の成長式は  $FL_t = 331 \{1 - \exp[-0.283(t + 1.45)]\}$  と推定された。最高年齢は、雌が15歳、雄が21歳であった。本種の成長は従来の知見よりも遅く、寿命も長いものと考えられた。

**Summary**

Age and growth were determined for threeline grunt *Parapristipoma trilineatum* based on otolith readings of 1043 specimens collected along the southwestern coast of Kii Peninsula, Japan. Observations of the otolith margin, together with comparisons of ring mark counts with age in artificially reared specimens, verified that such marks were produced once a year, the formation period corresponding approximately to the main spawning season (May–June). Both surface and cross-section methods were utilized for age determination, the surface method often resulting in underestimations of age for fish older than 2 years. Discrepancies between the two methods became greater with fish growth. The von Bertalanffy growth curve, based on ages inferred from the cross-section method, was  $FL_t = 331 \{1 - \exp[-0.283(t + 1.45)]\}$ , no significant difference being detected between male and female growth parameters. The oldest maximum ages inferred from the cross-section method were 15 and 21 years for females and males, respectively. It seems

likely that *P. trilineatum* grows more slowly and lives longer than previously thought, the difference being attributed primarily to differences in aging methods utilized in the present and previous studies.