

## PROTANDROUS HERMAPHRODITISM IN AUSTRALIAN SILVER PERCH, *BIDYANUS BIDYANUS* (MITCHELL, 1836)

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### Abstract

Gonadal development in two progenies of the Australian silver perch, *Bidyanus bidyanus*, was studied from the larval stage to 18.5 months. For approximately one month after hatching, it was impossible to visually or histologically determine the sex of the fish. Two to three months after hatching, anatomical and cytological sex differentiation occurred. At 4-5 months, the testis in most of the fish longer than 7-8 cm exhibited all stages of spermatogenesis including spermatozoa. Very few females were found among the 4 and 6.5 month fish. Up to 18.5 months, 7.1-23.5% were female (except in one batch). There were only 25 females, all at early stages of oogenesis, amongst 204 fish with differentiated sex gonads. In 10 of 17 histologically studied females, there were degenerating male cells (possibly spermatocytes) among a majority of developing oocytes. The predominance of phenotypic males, and the occurrence of females with oocytes and degenerating male cells, indicate that during the first years of life, this species is a protandrous hermaphrodite. The testis develops during ontogenesis in a direct manner, whereas the female gonad develops indirectly, passing through an intermediate masculine stage.

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