



HISTOMORPHOLOGICAL CHANGES IN THE TESTES OF OREOCHROMIS NILOTICUS DURING BREEDING AND NON BREEDING SEASONS

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Abstract:

The present work was conducted to highlight the relationship between the external morphology of *O. niloticus* and the histomorphological changes of the testes during the breeding and the non breeding seasons. A total of 58 male fishes of *O. niloticus* were used in this investigation. The males showed bright black coloration on the dorsal and lateral parts of their body and red colour on the ventral part of their body and head during the breeding season. Testes were paired long narrow structure of approximate equal size, locating in the posterior body cavity, attached to the dorsal body wall by mesorchium. During the non-breeding season, the testes were small, thread- like and dull white in colour. During the breeding season, testes were pinkish in colour and increased in weight. The testis was covered with a capsule consisting of few collagenous, elastic fibers. Testicular parenchyma consisted of branched seminiferous tubules and interstitial tissue. The seminiferous tubules were lined with spermatogenic and Sertoli cells. Seminiferous tubules were made up of spermatocysts. During spermatogenesis, primary spermatogonia proliferated to form secondary spermatogonia which divided mitotically to form primary spermatocytes. The later underwent meiotic divisions to form secondary spermatocytes that passed with second meiotic divisions giving many spermatids which transformed into spermatozoa in the lumen of the seminiferous tubules. Sertoli cells were pyriform cells with slightly eosinophilic cytoplasm and one basal nucleus. During the non- breeding seasons, the diameter of the seminiferous tubules reached $102.94 + 1.83 \mu\text{m}$ and the mean number of Sertoli cells was $1.79 + 0.16$ /spermatocyst. During the breeding season, the diameter of the seminiferous tubules was $124.78 + 2.32 \mu\text{m}$ and the mean number of Sertoli cells was $3.01 + 0.14$ /spermatocyst.

Keywords:

. niloticus, testes, breeding

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