

— Ultrastructural studies of sperm penetration in the egg of the European catfish, —



The process of sperm penetration into the egg of the European catfish *Silurus glanis* L. was investigated by scanning and transmission electron microscopy. Unfertilized ovum membrane under the internal micropylar aperture shows a critical depression with undulation and short microvilli corresponding to a specialized sperm entry site structure. Twenty seconds after insemination, the fertilizing spermatozoon fused with the egg at this specialized structure, without formation of an earlier fertilization cone, which had been confirmed in eggs of other fish. A cytoplasmic eminence developed however, immediately under the fused sperm head and then disappeared with time after fertilization to form a circular area around the fused sperm head, which in turn became embedded in the circular area with shortening of the flagellum. The micropyle in the catfish egg consisted of a micropylar vestibule and a canal, the internal micropylar canal being wide enough to permit the penetration of only one spermatozoon.

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