

A Scanning Electron Microscopic Study on the  
Glochidial Encystment of a Freshwater Clam  
*Anodonta archaeiformis* on the Host Fish *Carassius auratus*

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**ABSTRACT**

A scanning electron microscopic study on the glochidium and glochidial encystment of *Anodonta archaeiformis* on the host fish *Carassius auratus* was conducted. The shape of the glochidium is apparently subtriangular and its average size is  $270\mu\text{m} \times 260\mu\text{m} \times 145\mu\text{m}$ . The glochidial shell valves are of the same size, kept together by a ligament of  $50.4\mu\text{m}$  in length and  $5.5\mu\text{m}$  in width. Each of the glochidial shell valves has a long hooks studded with many spines on the superior face. A large area of at the apex of the valve surrounding the base of the hooks is provided with numerous small spines which become progressively smaller towards the periphery of the area. There are numerous niches scattered all over the surface. The glochidial shell valve is consisted of two layers. The mantle cells line the glochidial shell valves and some of hair cells are observed. A larval thread is  $2.3\mu\text{m}$  in diameter. In the artificial infection of the glochidia to one of the natural hosts, *Carassius auratus*, it takes about three to four hours to encyst the glochidia with epithelial cells of the fish fins. The method of encystment is by cell migration from the neighboring epithelial cells.