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SPONGILLA	
Taxonomy of the specimen	**Notes**
Phylum: Porifera **Class: Demospongiae**	• It is freshwater in habit, found in lakes, ponds, and slow-flowing rivers and streams. • Attach to submerged surfaces like rocks, logs, and aquatic vegetation. • Exhibit variable growth forms, typically encrusting or branching. • Often appear green due to symbiotic Chlorella algae within their cells. This mutualistic relationship provides the sponge with photosynthetic products. • Possess a skeletal framework of siliceous spicules. • Body structure is organized around a network of canals and chambers facilitating water flow for filter feeding. • Filter feeders, drawing water through numerous small pores (ostia) and expelling it through larger openings (oscula). • Trap microscopic food particles like bacteria, algae, and organic matter from the water current using specialized collar cells (choanocytes). • Asexual Reproduction by formation of gemmules. • Most Spongilla species are hermaphroditic, producing both sperm and eggs, though self-fertilization is usually avoided. **Ecological Significance:** • Contribute to water filtration, helping to maintain water clarity. • Serve as a food source for some aquatic invertebrates. • Their presence and abundance can be indicative of certain water quality conditions. Changes in their populations may signal environmental stress. • Commonly form symbiotic relationships with green algae (e.g., Chlorella), which reside within their tissues and provide them with photosynthetically produced nutrients. The algae, in turn, receive protection and a stable environment.

DIAGRAM OF SPONGILLA