Pearl Farming Mini Report

Pretty recently in this class, we have been learning about the large variety of marine invertebrates. Bivalves, a class of mollusks, can form crystalline spheres of calcium carbonate in their mantles; these are known as pearls, which are very expensive gemstones used in jewelry. Natural pearls form in an interesting way and are extremely rare. When a small object or organism enters the shell of a bivalve and irritates it, the bivalve covers it with a substance called nacre until it is shaped into a pearl. Cultured pearls, however, are formed when pearl farmers intentionally insert the irritant into the pearls shell, to allow the defense mechanism of the pearl to form many pearls at a time. As mentioned earlier, natural pearls are much rarer since cultured pearls make up nearly 100% of pearls on the market.

In the process of pearl farming, there are a few steps required to culture these pearls. Firstly, the farmers must pry open the bivalve just enough to leave it alive and insert the foreign irritant. Then, they leave the animals in the water for as long as 2 years until a pearl forms. The larger the pearl, the more value they have. This practice does not have much risk for environmental issues, but there are some. For one, it could have an impact on the oyster or clam populations in different oceans. Endangered species of bivalves could be impacted majorly. Another environmental risk is the possibility of introducing disease to a certain species of bivalve, which would be a huge danger for the ecosystem.

