FRED HUTCHINSON CANCER RESEARCH CENTER
SCIENCE EDUCATION PARTNERSHIP

DNA EXTRACTION FROM MUSSEL

Materials:

- Proteinase K (20mg/ml)
- 5X PCR Buffer
- PCR grade water
- mussels

PCR tubes
PCR machine
razor or dissecting scissors

1. Program the PCR machine (see Step 6).
2. Make 1 X PCR buffer in a PCR tube by adding 20µl of 5X PCR reaction buffer to 80 µl of water (If I were teaching a Biotech class or some other type of advanced students, my instructions would be to make 100 ml of 1X PCR buffer. They would be expected to do the calculations and then make the reagent.)
3. Add 5µl of Proteinase K to 100 µl of 1X PCR reaction buffer.
4. Open the mussel, identify the mantel (see photo), and excise a small fragment of the mantel tissue (2-3 mm).
5. Add a 2-3 mm fragment of the mussel mantle tissue to the tube containing 1X PCR buffer and Proteinase K.
6. Place in a PCR machine and run the following program:

   65^{o}C for 90 minutes
   95^{o}c for 15 minutes (inactivates Proteinase K)

6. Place the PCR tube containing the mussel DNA into a micro-centrifuge, and spin for 10 seconds to pellet any remaining tissue in the bottom of the tube.
7. Transfer the supernatant containing the mussel DNA to a sterile, RNase/DNase free microfuge tube.
8. Store DNA at -20^{o}C.