

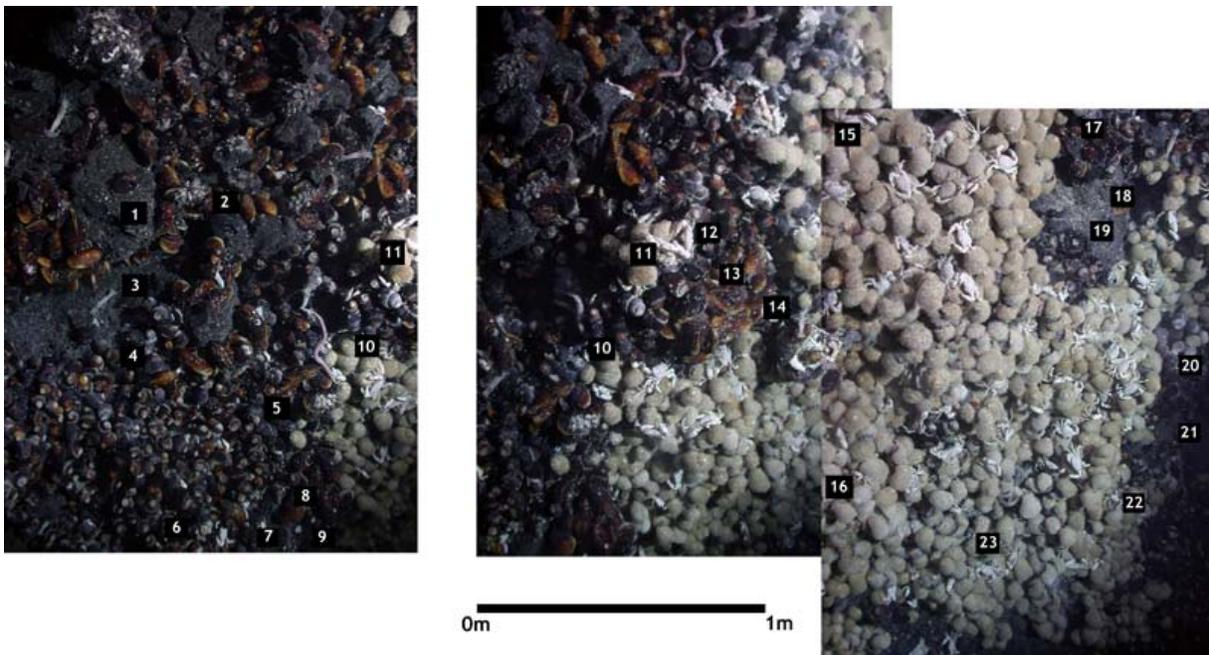
Using Photographs to Explore Life on the Ocean Floor

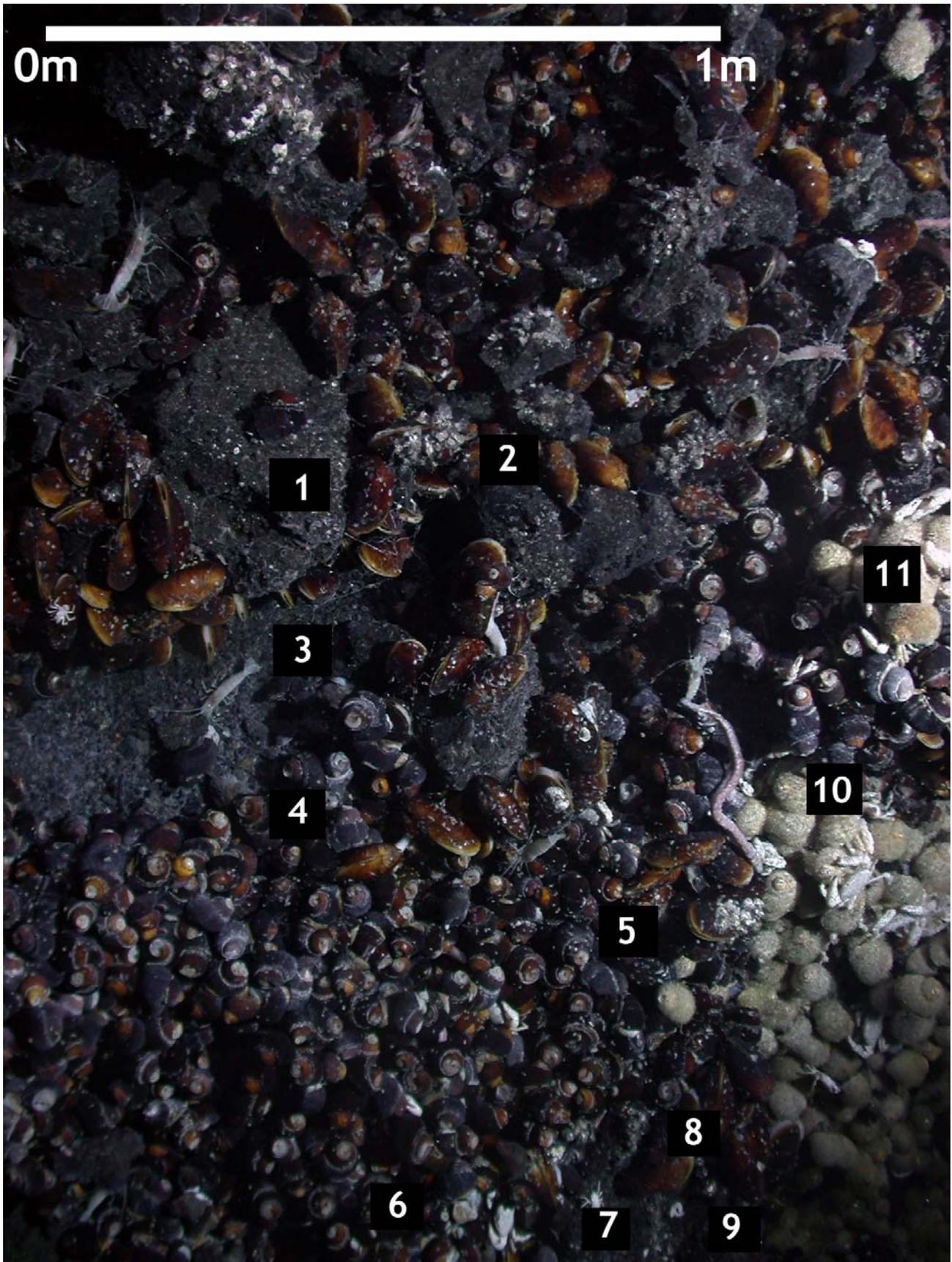
One of the first questions deep-sea biologists ask in studying animals on the seafloor is “How are animals distributed in relation to one another and to the abiotic (non-living) environment?”. However, investigating remote and inaccessible areas, like seafloor hydrothermal vents, poses some challenges, including finding and surveying the animals in the first place. One quick and relatively easy way deep-sea biologists visualize patterns of animal distribution is by a technique called photomosaiking (i.e., taking a series of overlapping, high-resolution images and then piecing them together into one large image). This important technique allows scientists to study the distribution of animals across a relatively large area.

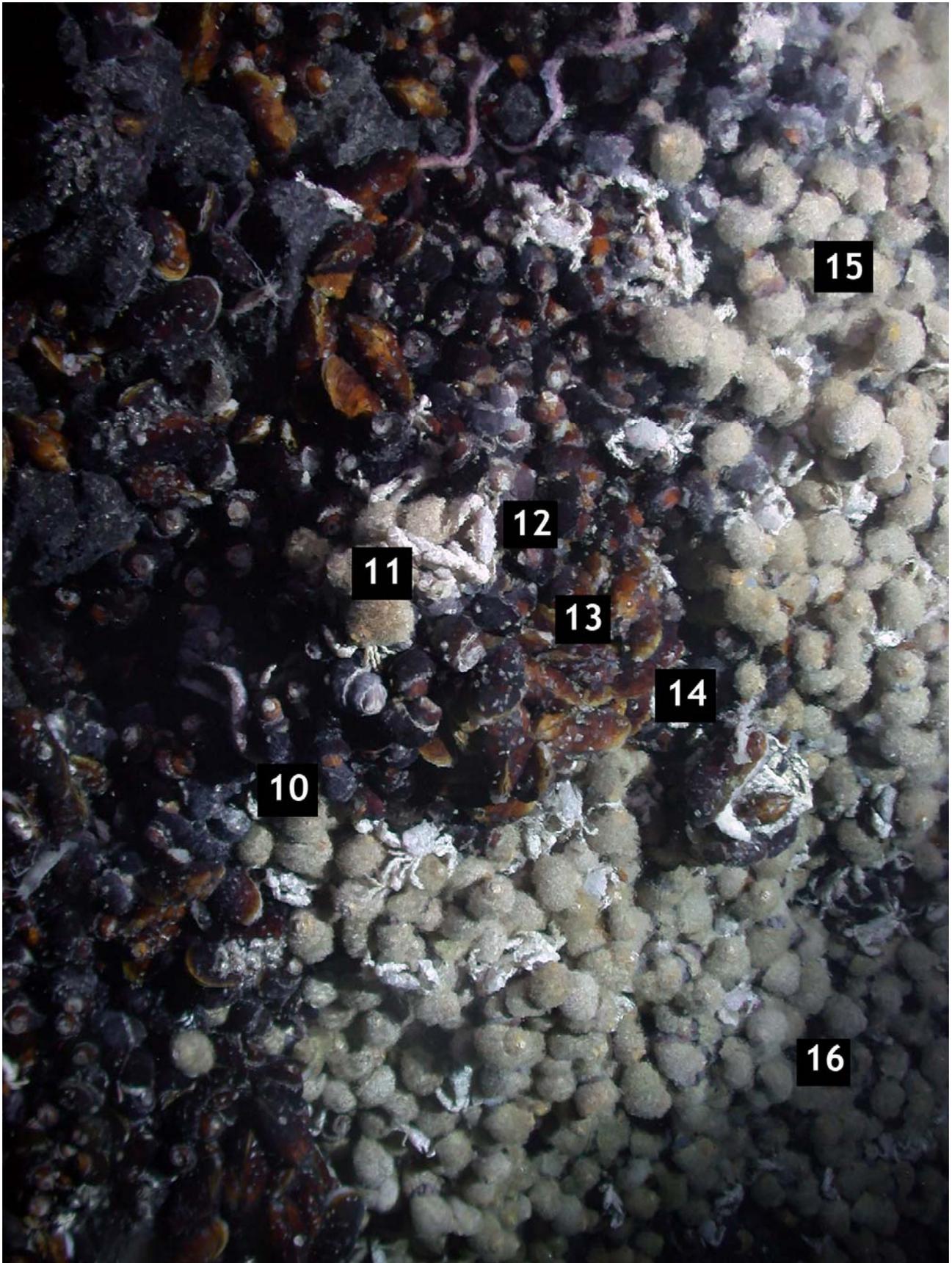
In this activity you will construct your own mini-mosaic from three high-resolution images taken by the ROV JASON II at a hydrothermal vent area in the Lau Back-arc Basin. After you have made your mosaic, you will transcribe temperature measurements onto the mosaic and look for patterns between the abiotic (in this case temperature) environment and the animals present.

Note: To make the mosaic, trim off the white border around each picture and then line them up into one continuous image. The images overlap, as illustrated below. Use the numbered locations of temperature measurements to help match the pictures. Tape them together.

Below is the partially constructed mini-photomosaic. Use it as a guide and finish connecting the pictures.







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