Figure 2. The horizontal-to-vertical spectral-ratio (HVSR) method uses a single broadband, three-component seismometer *A*, to record ambient seismic noise from the earth's surface. Ambient seismic noise is composed of microtremors caused by ocean waves, wind, rainfall, and anthropogenic sources such as traffic and industry (Ibs-von Seht and Wohlenberg, 1999). The HVSR method works best at locations like Cape Cod where generally homogeneous, unconsolidated sediments overlie consolidated bedrock (Lane and others, 2008). At each measurement site, the seismometer *B*, was placed firmly on the ground to ensure sufficient coupling with the earth, and data were collected for a minimum of 30 minutes.