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Cover photograph (Copyright © 2016, American Society for Microbiology. All Rights Reserved): Scanning electron micrograph of predatory *Halobacteriovorax* spp. attacking *Escherichia coli* O157:H7. *Halobacteriovorax* (formerly *Bacteriovorax*) spp. are small, Gram-negative, predatory bacteria found in the marine environment. These predators enter into a susceptible host bacterium and reside within the periplasmic space where they utilize cytoplasmic nutrients of the host to support growth and replication. The replicative form, known as a bdelloplast, elongates within the host and undergoes septation into progeny cells as the host is lysed, releasing cells capable of attacking more prey. Pictured here are infected *E. coli* O157:H7 bacteria (rounded) under attack by a strain of *Halobacteriovorax* isolated from seawater of the east coast of the United States. (See related article on page 922.)