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COVER The Hawaiian sepiolid squid *Euprymna scolopes* uses the luminescence of bacterial symbionts in its nocturnal behavior. This ventral dissection (the squid is ~3.5 centimeters in length) reveals the light-emitting organ as a complex, bilobed structure in the center of the mantle cavity. Normal light-organ development is initiated by specific strains of *Vibrio fischeri*. See page 1491. [Photograph by William Ormerod, University of Southern California]

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