

APPLIED AND ENVIRONMENTAL MICROBIOLOGY

Volume 75

April 2009

No. 7

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Cover photograph (Copyright © 2009, American Society for Microbiology. All Rights Reserved.): *Lumbricus* sp. breaking the surface of an agricultural soil in Bayreuth, Germany. The inset shows a microsensor approaching the cuticle of a sedated *Lumbricus* sp. In situ microsensor analyses identified hydrogen and nitrous oxide as concomitant indicators of fermentation and denitrification in the anoxic alimentary canal of the earthworm. Photo courtesy of Marcus A. Horn and Pia K. Wüst. (See related article on page 1852.)