

# DNA barcoding identifies the first North American records of the Eurasian moth, *Eupithecia pusillata* (Lepidoptera: Geometridae)

Jeremy R. deWaard<sup>1,2</sup>, Leland M. Humble<sup>1,3</sup>, and B. Christian Schmidt<sup>4</sup>

<sup>1</sup> University of British Columbia, Department of Forest Sciences, Forestry Sciences Centre, Vancouver, BC, Canada V6T 1Z4

<sup>2</sup> Royal British Columbia Museum, Entomology, 675 Belleville Street, Victoria, BC, Canada V8W 9W2 (email: [jdewaard@interchange.ubc.ca](mailto:jdewaard@interchange.ubc.ca))

<sup>3</sup> Natural Resources Canada, Canadian Forest Service, Pacific Forestry Centre, 506 West Burnside Road, Victoria, BC, Canada V8Z 1M5 (email: [Leland.Humble@nrcan-rncan.gc.ca](mailto:Leland.Humble@nrcan-rncan.gc.ca))

<sup>4</sup> Canadian Food Inspection Agency, Canadian National Collection of Insects, Arachnids and Nematodes, K.W. Neatby Building, 960 Carling Avenue, Ottawa, ON, Canada K1A 0C6 (email: [Chris.Schmidt@inspection.gc.ca](mailto:Chris.Schmidt@inspection.gc.ca))

## Abstract

The first North American records of the juniper pug moth, *Eupithecia pusillata* (Denis & Schiffermüller, 1775) (Lepidoptera: Geometridae), brought to our attention using DNA barcoding, are presented. Documentation and collection localities suggest it was introduced, established, and likely has persisted, at least in the Greater Vancouver area of British Columbia since the mid-1970s. We discuss the integration of DNA barcoding into routine biosurveillance and forest insect surveys to prevent such delay in recognition of non-indigenous species—in this case, 34 years.