

Cover image

The top panel shows a heat map of the five million barcode records available on July 1, 2016 (Purple circles > 1000 records, red > 100 records, orange > 10 records, yellow 1–10 records). The images of a fungus (mushroom: *Coprinellus disseminatus*), a protist (green algae: *Volvox* sp.), an animal (moth: *Automeris io*), and a plant (maple: *Acer circinatum*) in the middle panel indicate the utility of DNA barcoding across eukaryotic diversity. The lower panel shows freshwater, terrestrial and marine biomes, signaling the goal of understanding global biodiversity. The DNA barcode joining the two lower panels represents the link between understanding organismic diversity and ecosystem function. (Cover image by Suzanne Bateson, Centre for Biodiversity Genomics, University of Guelph.)

Typeset by Nova Techset Private Limited, Bengaluru & Chennai, India. Printed in the UK by Latimer Trend.

This paper meets the requirements of ISO 9706:1994(E) and ANSI/NISO Z39.48-1992 (Permanence of Paper) effective with volume 335, issue 1273, 1992.

Phil. Trans. R. Soc. B (ISSN 0962-8436) is published 26 times a year for US\$6461 per year by the Royal Society, and is distributed in the USA by Agent named Air Business, C/O Worldnet Shipping USA Inc., 149-35 177th Street, Jamaica, New York, NY11434, USA. US Postmaster: Send address changes to *Phil. Trans. R. Soc. B*, C/O Air Business Ltd, C/O Worldnet Shipping USA Inc, 149-35 177th Street Jamaica, New York, NY11414.