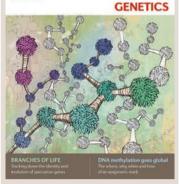
## FROM THE EDITORS



## nature REVIEWS



► COVER: 'Budding genus' by Patrick Morgan, inspired by the Progress article on p175.









espite conservation in many biological processes, there are abundant examples of how nature can solve a problem in more than one way. As illustrated by several articles in this issue, exploring differences among species provides insights that are just as valuable as exploiting similarities.

In their Review on page 204, Law and Jacobsen bring together recent findings from plants and animals that expand our understanding of how DNA methylation is established, maintained and modified. There are important differences in these processes between plants and animals in terms of, for example, the mechanisms used to target DNA methylation in specific contexts. However, a closer look reveals that several overall themes apply to both groups, an appreciation of which has led to important advances.

An area in which pinpointing differences among species is at the crux of research is the study of evolution. As discussed in a Research Highlight on page 170, the genomes of three species of the parisitoid wasp Nasonia have now been sequenced. Along with the development of a sophisticated genetic tool kit for these species, this achievement makes Nasonia species potentially powerful arthropod models for evolutionary developmental biology. Comparing the genetics of Nasonia development to that of the well-established insect model Drosophila melanogaster should deliver many new insights.

Exploring differences between species is also key to understanding the process of speciation, which is the topic of the Progress article by Presgraves on page 175. Several 'speciation genes' that determine crucial differences between closely related species have been identified over the past few years, representing an important step forward in understanding how new species form.

## **EDITORIAL OFFICES**

LONDON NatureReviews@nature.com The Macmillan Building, 4 Crinan Street, London N1 9XW, UK Tel: +44 (0)20 7843 3620; Fax: +44 (0)20 7843 3629 **CHIEF EDITOR:** Louisa Flintoft SENIOR EDITOR: Tanita Casci ASSOCIATE EDITOR: Mary Muers ASSISTANT EDITOR: Meera Swami **COPY EDITOR:** Lewis Packwood SENIOR COPY EDITOR: Man Tsuev Tse SENIOR ART EDITOR (NRG): Patrick Morgan ART CONTROLLER: Susanne Harris SENIOR ART EDITOR: Vicky Summersby MANAGING PRODUCTION EDITOR: ludith Shadwell SENIOR PRODUCTION EDITOR: Simon Fenwick PRODUCTION CONTROLLER: Natalie Smith EDITORIAL ASSISTANTS: Jacques Smit, Laura Corns

WEB PRODUCTION MANAGER: Deborah Anthony MARKETING MANAGERS: Tim Redding. Leah Rodriguez

## **MANAGEMENT OFFICES**

LONDON nature@nature.com The Macmillan Building, 4 Crinan Street, London N1 9XW, UK Tel: +44 (0)20 7833 4000: Fax: +44 (0)20 7843 4596/7 OFFICE MANAGER: Laura Firman PUBLISHER: Stephanie Diment MANAGING DIRECTOR: Steven Inchcoombe EDITOR-IN-CHIEF, NATURE PUBLICATIONS: Philip Campbell ASSOCIATE DIRECTORS: Jenny Henderson, Tony Rudland EDITORIAL PRODUCTION DIRECTOR: lames McOua PRODUCTION DIRECTOR: Yvonne Strong

DIRECTOR, WEB PUBLISHING: Timo Hannay HEAD OF WEB PRODUCTION: Alexander Thurrell

NATUREJOBS PUBLISHER: Della Sar NEW YORK nature@natureny.com Nature Publishing Group, 75 Varick Street, 9th floor, New York, NY 10013-1917, USA Tel: +1 212 726 9200; Fax: +1 212 696 9006 CHIEF TECHNOLOGY OFFICER: Howard Ratn HEAD OF INTERNAL SYSTEMS DEVELOPMENT: Anthony Barrera HEAD OF SOFTWARE SERVICES: Luigi Squillante HEAD OF GLOBAL ADVERTISING, SALES AND SPONSORSHIP: Dean Sanderson HEAD OF NATURE RESEARCH & REVIEWS MARKETING: Sara Girard BUSINESS DEVELOPMENT EXECUTIVE: David Bagshav

TOKYO nature@natureasia.com Chiyoda Building 5F, 2-37-1 Ichigayatamachi, Shinjuku-ku, Tokyo 162-0843, Japar Tel: +81 3 3267 8751: Eax: +81 3 3267 8746 ASIA-PACIFIC PUBLISHER: Antoine E Bocquet MANAGER: Koichi Nakamura ASIA-PACIFIC SALES DIRECTOR: Kate Yoneyama SENIOR MARKETING MANAGER: Peter Yoshiha MARKETING/PRODUCTION MANAGER: Takesh Muraka INDIA 5A/12 Ansari Road, Daryganj,

New Delhi 110 002, India Tel/Fax: +91 11 2324 4186 SALES AND MARKETING MANAGER, INDIA: Harpal Singh Gill Copyright © 2010 Nature Publishing Group Research Highlight images courtesy of

Getty Images unless otherwise credited. Printed in Wales by Cambrian Printers on acid-free paper