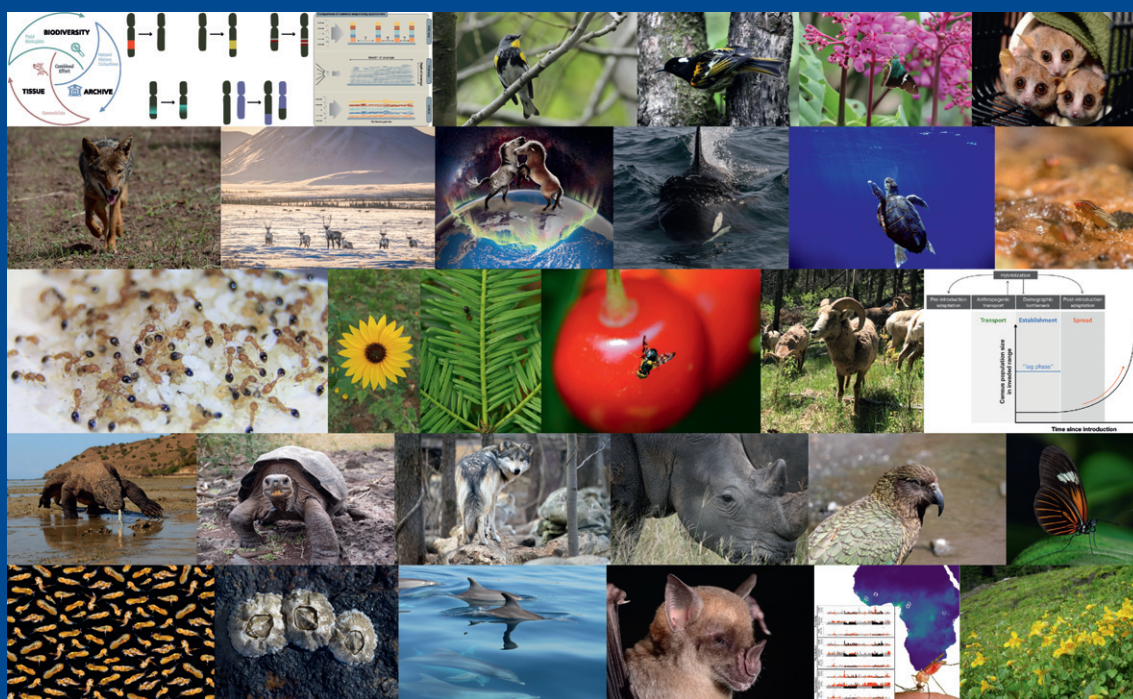


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# MOLECULAR ECOLOGY



**Special Issue: WHOLE GENOME SEQUENCING IN MOLECULAR ECOLOGY**

**Editors: Evelyn L. Jensen, Rebecca S. Taylor, David W. Coltman,  
Andrew D. Foote, Sangeet Lamichhaney**

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**Cover Illustrations:** (Left to Right): (Image 1): A model to promote and sustain high-quality biodiversity tissue archives. See Blom, 2021 in Special Issue for further details; (Image 2): Clockwise from top left are examples of a deletion, insertion, tandem duplication, chromosomal translocation and an inversion; (Image 3): Diagram showing the distribution of sequencing reads mapped to a reference genome under (A) a RAD-seq, (B) a Pool-seq, and (C) a lcWGS design; (Image 4): Male Audubon's yellow-rumped warbler (*Setophaga coronata auduboni*); (Image 5): Male hibi on the lookout, captured in Zealandia, Wellington (Aotearoa New Zealand); (Image 6): Optimizing the assembly and loci extraction from different types of sequencing techniques is a way forward for phylogenomics and molecular ecology, especially for non-model organisms such as the specimen from the *Urbanus* genus (Lepidoptera: Hesperidae) seen in the photo; (Image 7): To estimate de novo mutation rates in sexually reproducing organisms, investigators can compare the genomes of parents and their offspring (so-called "trio" studies) to count mutations that have occurred in the parental germline. These mutations provide fuel for the engine of evolution; (Image 8): The African golden wolf is very well adapted to various types of habitats, including very dry areas. The image was taken in the Atlas Mountains; (Image 9): Curious caribou, Sahtu mountains; (Image 10): Ancient DNA recovered from fossils reveals that ancient horses (*Equus caballus*) spanned the Beringia region during the ice age; (Image 11): whole genome sequences of killer whales reveal demographic histories; (Image 12): Loggerhead (*Caretta caretta*) sea turtle; (Image 13): *Zaprionus* spp. in the field on the island of São Tomé; (Image 14): Lab colony of the ant *Cardiocrandylus obscurior*; (Image 15): *Helianthus annuus* subsp. texanus inflorescence; (Image 16): A Formica obscuripes worker in the Cascade Mountains, Washington, USA; (Image 17): The European cherry fruit fly *Rhagoletis cerasi* is an important economic pest species infesting cherries in its native range in Europe; (Image 18): Bighorn sheep (*Ovis canadensis*) photo taken at Banff National Park, CA; (Image 19): The invasion sequence: a longstanding eco-evolutionary model of biological invasion; (Image 20): Adult Komodo dragon *Varanus komodoensis*; (Image 21): *Chelonoidis duncanensis* adult in the wild on Pinzón Island, Galapagos; (Image 22): A male Mexican wolf at Wolf Conservation Center; (Image 23): A close-up image of a southern white rhinoceros at the Manyeleti Game Reserve, South Africa. Taken in March 2020; (Image 24): Kea (*Nestor notabilis*) on the Te Anau-Milford Sound road, in Southland, New Zealand; (Image 25): *Heliconius erato lativittata*; (Image 26): Experimental population of the copepod *Tigriopus californicus*; (Image 27): Three adult acorn barnacles (*Semibalanus balanoides*) in the Swedish rocky shore; (Image 28): Indo-Pacific bottlenose dolphins (*Tursiops aduncus*) in Gulf St Vincent, South Australia; (Image 29): *Phyllostomus discolor*; (Image 30): Graphs showing genome-wide associations between SNP variants and environmental variables for *Anopheles gambiae*, with genetic sampling points shown on a map of continent-wide precipitation. Inset photo of a female *Anopheles gambiae* individual obtaining a blood meal accessed from the Center for Disease Control Public Health Image Library; (Image 31): Annual population of the common monkeyflower, *Mimulus guttatus*, in bloom in the Cascades Range near the high elevation end of the transect sampled for population re-sequencing by Colicchio et al. in this issue.

**Photo Credit:** (Left to Right): (Image 1): Dr. Foteini Spagopoulou; (Image 2): Illustrated by Jana Wold; (Image 3): not a photograph, but Arne Jacobs and Nina O. Therkildsen made the figure; (Image 4): Sheri Rypstra; (Image 5): Stuart Attwood; (Image 6): Daniel Linke; (Image 7): David Haring, Duke Lemur Center; (Image 8): Vicente Urios; (Image 9): Pierre-Emmanuel Chailion; (Image 10): Julius Csotonyi; (Image 11): Andrew Foote; (Image 12): TAMAR Image Bank; (Image 13): Aaron Comeault; (Image 14): Mohammed Erbbi; (Image 15): Nora Mitchell; (Image 16): Daniel K. Pierce; (Image 17): Hannes Schuler; (Image 18): Sarah H. D. Santos; (Image 19): Henry North; (Image 20): Achmad Ariefiandy; (Image 21): Evelyn Jensen; (Image 22): Wolf Conservation Center; (Image 23): Yoshan Moodley; (Image 24): Federico Massetti; (Image 25): Dr Luca Livraghi; (Image 26): Ana Luisa Ahern; (Image 27): Fredrik Pleijel; (Image 28): Nikki Zandardo; (Image 29): Stephen J. Rossiter; (Image 30): CDC/James Gathany; (Image 31): Benjamin K. Blackman.

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