

Contents

Invited Reviews

- 1325 Methane emissions from wetlands: biogeochemical, microbial, and modeling perspectives from local to global scales**
Scott D. Bridgman, Hinsby Cadillo-Quiroz, Jason K. Keller and Qianlai Zhuang
- 1347 Effects of grazing on grassland soil carbon: a global review**
Megan E. McSherry and Mark E. Ritchie

Primary Research Articles

- 1358 Impacts of elevated terrestrial nutrient loads and temperature on pelagic food-web efficiency and fish production**
R. Lefébure, R. Degerman, A. Andersson, S. Larsson, L.-O. Eriksson, U. Båmstedt and P. Byström
- 1373 Ecological traits and environmental affinity explain Red Sea fish introduction into the Mediterranean**
Jonathan Belmaker, Valeriano Parravicini and Michel Kulbicki
- 1383 Fragmentation and thermal risks from climate change interact to affect persistence of native trout in the Colorado River basin**
James J. Roberts, Kurt D. Fausch, Douglas P. Peterson and Mevin B. Hooten
- 1399 Resilience of marine turtle regional management units to climate change**
Mariana M. P. B. Fuentes, David A. Pike, Andrew Dimatteo and Bryan P. Wallace
- 1407 Interactive direct and plant-mediated effects of elevated atmospheric [CO₂] and temperature on a eucalypt-feeding insect herbivore**
T. J. Murray, D. S. Ellsworth, D. T. Tissue and M. Riegler
- 1417 Artificial light pollution: are shifting spectral signatures changing the balance of species interactions?**
Thomas W. Davies, Jonathan Bennie, Richard Inger, Natalie Hempel de Ibarra and Kevin J. Gaston
- 1424 Evaluating atmospheric CO₂ inversions at multiple scales over a highly inventoried agricultural landscape**
Andrew E. Schuh, Thomas Lauvaux, Tristram O. West, A. Scott Denning, Kenneth J. Davis, Natasha Miles, Scott Richardson, Marek Uliasz, Erandathie Lokupitiya, Daniel Cooley, Arlyn Andrews and Stephen Ogle
- 1440 Climate change and broadacre livestock production across southern Australia. 1. Impacts of climate change on pasture and livestock productivity, and on sustainable levels of profitability**
Andrew D. Moore and Afshin Ghahramani
- 1456 Declining trend of carbon in Finnish cropland soils in 1974–2009**
Jaakko Heikkinen, Elise Ketoja, Visa Nuutinen and Kristiina Regina
- 1470 Local temperatures inferred from plant communities suggest strong spatial buffering of climate warming across Northern Europe**
Jonathan Lenoir, Bente Jessen Graae, Per Arild Aarrestad, Inger Greve Alsos, W. Scott Armbruster, Gunnar Austrheim, Claes Bergendorff, H. John B. Birks, Kari Anne Bråthen, Jörg Brunet, Hans Henrik Bruun, Carl Johan Dahlberg, Guillaume Decocq, Martin Diekmann, Mats Dynesius, Rasmus Ejrnæs, John-Arvid Grytnes, Kristoffer Hylander, Kari Klanderud, Miska Luoto, Ann Milbau, Mari Moora, Bettina Nygaard, Arvid Odland, Virve Tuulia Ravolainen, Stefanie Reinhardt, Sylvi Marlen Sandvik, Fride Høistad Schei, James David Mervyn Speed, Liv Unn Tveraabak, Vigdis Vandvik, Liv Guri Velle, Risto Virtanen, Martin Zobel and Jens-Christian Svenning

- 1482 **Winter climate change and coastal wetland foundation species: salt marshes vs. mangrove forests in the southeastern United States**
Michael J. Osland, Nicholas Enwright, Richard H. Day and Thomas W. Doyle
- 1495 **Tidal marsh plant responses to elevated CO₂, nitrogen fertilization, and sea level rise**
J. Adam Langley, Thomas J. Mozdzer, Katherine A. Shepard, Shannon B. Hagerty and J. Patrick Megonigal
- 1504 **Quantifying variation in forest disturbance, and its effects on aboveground biomass dynamics, across the eastern United States**
Mark C. Vanderwel, David A. Coomes and Drew W. Purves
- 1518 **Detecting nonlinear response of spring phenology to climate change by Bayesian analysis**
Katherine S. Pope, Volker Dose, David Da Silva, Patrick H. Brown, Charles A. Leslie and Theodore M. Dejong
- 1526 **Drought characteristics' role in widespread aspen forest mortality across Colorado, USA**
Leander D. L. Anderegg, William R. L. Anderegg, John Abatzoglou, Alexandra M. Hausladen and Joseph A. Berry
- 1538 **An estimate of potential threats levels to soil biodiversity in EU**
Ciro Gardi, Simon Jeffery and Andrea Saltelli
- 1549 **Soil warming increases plant species richness but decreases germination from the alpine soil seed bank**
Gemma L. Hoyle, Susanna E. Venn, Kathryn J. Steadman, Roger B. Good, Edward J. McAuliffe, Emlyn R. Williams and Adrienne B. Nicotra
- 1562 **Soil-specific response functions of organic matter mineralization to the availability of labile carbon**
Eric Paterson and Allan Sim
- 1572 **Future carbon dioxide concentration decreases canopy evapotranspiration and soil water depletion by field-grown maize**
Mir Zaman Hussain, Andy Vanlooche, Matthew H. Siebers, Ursula M. Ruiz-Vera, R. J. Cody Markelz, Andrew D. B. Leakey, Donald R. Ort and Carl J. Bernacchi
- 1585 **Impact of agricultural management practices on soil organic carbon: simulation of Australian wheat systems**
Gang Zhao, Brett A. Bryan, Darran King, Zhongkui Luo, Enli Wang, Xiaodong Song and Qiang Yu
- 1598 **Elevated temperature prolongs long-term effects of a pesticide on *Daphnia* spp. due to altered competition in zooplankton communities**
Saskia Knillmann, Nathalie C. Stampfli, Yury A. Noskov, Mikhail A. Beketov and Matthias Liess
- 1610 **Regional zooplankton dispersal provides spatial insurance for ecosystem function**
Celia C. Symons and Shelley E. Arnott
- 1620 **Dramatic changes in a phytoplankton community in response to local and global pressures: a 24-year survey of the river Loire (France)**
S. Larroudé, N. Massei, P. Reyes-Marchant, C. Delattre and J.F. Humbert
- 1632 **Anthropogenic changes to seawater buffer capacity combined with natural reef metabolism induce extreme future coral reef CO₂ conditions**
Emily C. Shaw, Ben I. McNeil, Bronte Tilbrook, Richard Matear and Michael L. Bates
- Erratum**
- 1642 **Interactions between climate and habitat loss effects on biodiversity: a systematic review and meta-analysis**
Chrystal S. Mantyka-Pringle, Tara G. Martin and Jonathan R. Rhodes