

Contents

Opinion

2609 **Keeping management effects separate from environmental effects in terrestrial carbon accounting**
Richard A. Houghton

2613 **Could some coral reefs become sponge reefs as our climate changes?**
James J. Bell, Simon K. Davy, Timothy Jones, Michael W. Taylor and Nicole S. Webster

Primary Research Articles

2625 **Susceptibility to a metal under global warming is shaped by thermal adaptation along a latitudinal gradient**
Khuong Dinh Van, Lizanne Janssens, Sara Debecker, Maarten De Jonge, Philippe Lambret, Viktor Nilsson-Örtman, Lieven Bervoets and Robby Stoks

2634 **Urbanization and its effects on personality traits: a result of microevolution or phenotypic plasticity?**
Ana Catarina Miranda, Holger Schielzeth, Tanja Sonntag and Jesko Partecke

2645 **Predicting shifts in parasite distribution with climate change: a multitrophic level approach**
Rob S. A. Pickles, Daniel Thornton, Richard Feldman, Adam Marques and Dennis L. Murray

2655 **Calling behaviour under climate change: geographical and seasonal variation of calling temperatures in ectotherms**
Diego Llusia, Rafael Márquez, Juan F. Beltrán, Maribel Benítez and José P. Do Amaral

2675 **Future sea ice conditions in Western Hudson Bay and consequences for polar bears in the 21st century**
Laura Castro de la Guardia, Andrew E. Derocher, Paul G. Myers, Arjen D. Terwisscha van Scheltinga and Nick J. Lunn

2688 **Projecting demographic responses to climate change: adult and juvenile survival respond differently to direct and indirect effects of weather in a passerine population**
Kristen E. Dybala, John M. Eadie, Thomas Gardali, Nathaniel E. Seavy and Mark P. Herzog

2698 **Effects of ocean warming and acidification on survival, growth and skeletal development in the early benthic juvenile sea urchin (*Heliocidaris erythrogramma*)**
Kennedy Wolfe, Symon A. Dworjanyn and Maria Byrne

2708 **Tidal downwelling and implications for the carbon biogeochemistry of cold-water corals in relation to future ocean acidification and warming**
Helen S. Findlay, Yuri Artioli, Juan Moreno Navas, Sebastian J. Hennige, Laura C. Wicks, Veerle A. I. Huvenne, E. Malcolm S. Woodward and J. Murray Roberts

2720 **Wetlands serve as natural sources for improvement of stream ecosystem health in regions affected by acid deposition**
Katrina L. Pound, Gregory B. Lawrence and Sophia I. Passy

2729 **Climate warming alters effects of management on population viability of threatened species: results from a 30-year experimental study on a rare orchid**
Nina Sletvold, Johan P. Dahlgren, Dag-Inge Øien, Asbjørn Moen and Johan Ehrlén

2739 **A projection of ozone-induced wheat production loss in China and India for the years 2000 and 2020 with exposure-based and flux-based approaches**
Haoye Tang, Masayuki Takigawa, Gang Liu, Jianguo Zhu and Kazuhiko Kobayashi

contents continued on inside back cover

Contents (*continued*)

- 2753 **Net primary productivity and rain-use efficiency as affected by warming, altered precipitation, and clipping in a mixed-grass prairie**
Xia Xu, Rebecca A. Sherry, Shuli Niu, Dejun Li and Yiqi Luo
- 2765 **Biotic interactions mediate the expansion of black mangrove (*Avicennia germinans*) into salt marshes under climate change**
Hongyu Guo, Yihui Zhang, Zhenjiang Lan and Steven C. Pennings
- 2775 **Convergent responses of nitrogen and phosphorus resorption to nitrogen inputs in a semiarid grassland**
Xiao-Tao Lü, Sasha Reed, Qiang Yu, Nian-Peng He, Zheng-Wen Wang and Xing-Guo Han
- 2785 **Unraveling environmental drivers of a recent increase in Swiss fungi fruiting**
Ulf Büntgen, Martina Peter, Håvard Kauserud and Simon Egli
- 2795 **Plant diversity does not buffer drought effects on early-stage litter mass loss rates and microbial properties**
Anja Vogel, Nico Eisenhauer, Alexandra Weigelt and Michael Scherer-Lorenzen
- 2804 **Iron oxidation stimulates organic matter decomposition in humid tropical forest soils**
Steven J. Hall and Whendee L. Silver
- 2814 **Soil invertebrate fauna affect N₂O emissions from soil**
Imke Kuiper, Gerlinde B. de Deyn, Madhav P. Thakur and Jan Willem van Groenigen
- 2826 **Winter climate change effects on soil C and N cycles in urban grasslands**
Jorge Durán, Alexandra Rodríguez, Jennifer L. Morse and Peter M. Groffman
- 2838 **Impacts of elevated CO₂ concentration on the productivity and surface energy budget of the soybean and maize agroecosystem in the Midwest USA**
Tracy E. Twine, Jarod J. Bryant, Katherine T. Richter, Carl J. Bernacchi, Kelly D. McConnaughay, Sherri J. Morris and Andrew D. B. Leakey
- 2853 **Spatial variation in landscape-level CO₂ and CH₄ fluxes from arctic coastal tundra: influence from vegetation, wetness, and the thaw lake cycle**
Cove S. Sturtevant and Walter C. Oechel
- 2867 **Anomalous, extreme weather disrupts obligate seed dispersal mutualism: snow in a subtropical forest ecosystem**
Youbing Zhou, Chris Newman, Jin Chen, Zongqiang Xie and David W. MacDonald
- 2878 **Developing a diagnostic model for estimating terrestrial vegetation gross primary productivity using the photosynthetic quantum yield and Earth Observation data**
Booker O. Ogutu, Jadunandan Dash and Terence P. Dawson
- 2893 **CO₂ emissions from land-use change affected more by nitrogen cycle, than by the choice of land-cover data**
Atul K. Jain, Prasanth Meiyappan, Yang Song and Joanna I. House
- 2907 **The production of phytolith-occluded carbon in China's forests: implications to biogeochemical carbon sequestration**
Zhaoliang Song, Hongyan Liu, Beilei Li and Xiaomin Yang
- 2916 **Rates of Disturbance vary by data resolution: implications for conservation schedules using the Alberta Boreal Forest as a case study**
P. E. Komers and Z. Stanojevic