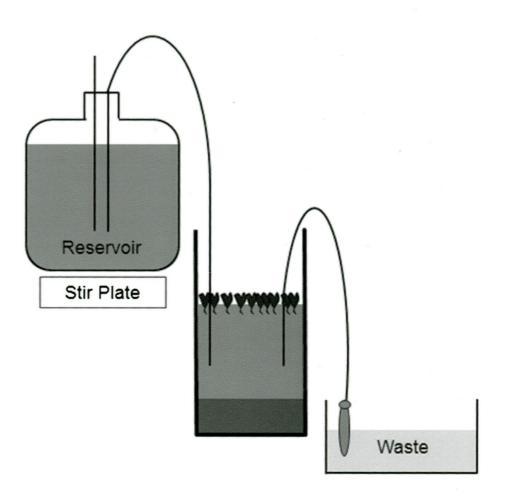
MU

Biogeochemistry





Biogeochemistry

An International Journal

Volume 119 · Numbers 1-3 · June 2014

SYNTHESIS AND EMERGING IDEAS

The role of vegetation in methane flux to the atmosphere: should vegetation be included as a distinct category in the global methane budget? M.J. Carmichael \cdot E.S. Bernhardt \cdot S.L. Bräuer \cdot W.K. Smith 1

ORIGINAL PAPERS

Biogenic silica recycling in sea ice inferred from Si-isotopes: constraints from Arctic winter first-year sea ice

F. Fripiat · J.-L. Tison · L. André · D. Notz · B. Delille 25

A Michaelis-Menten type equation for describing methylmercury dependence on inorganic mercury in aquatic sediments

D. Cossa · C. Garnier · R. Buscail · F. Elbaz-Poulichet · N. Mikac · N. Patel-Sorrentino · E. Tessier · S. Rigaud · V. Lenoble · C. Gobeil 35

Biodegradation of ferrihydrite-associated organic matter

K. Eusterhues \cdot J. Neidhardt \cdot A. Hädrich \cdot K. Küsel \cdot K.U. Totsche 45

Effects of floating vegetation on denitrification, nitrogen retention, and greenhouse gas production in wetland microcosms

A.E. Jacobs · J.A. Harrison 51

Soil carbon sensitivity to temperature and carbon use efficiency compared across microbial-ecosystem models of varying complexity

J. Li · G. Wang · S.D. Allison · M.A. Mayes · Y. Luo 67

Combined global change effects on ecosystem processes in nine U.S. topographically complex areas

M.D. Hartman · J.S. Baron · H.A. Ewing · K.C. Weathers **85**

The effects of wildfire on the water chemistry of dilute, acidic lakes in southern Norway

E. Lydersen · R. Høgberget · C.E. Moreno · Ø.A. Garmo · P.C. Hagen 109

Increased inorganic nitrogen leaching from a mountain grassland ecosystem following grazing removal: a hangover of past intensive land-use?

S.T. McGovern · C.D. Evans · P. Dennis · C.A. Walmsley · A. Turner · M.A. McDonald 125

Seasonal oxygen, nitrogen and phosphorus benthic cycling along an impacted Baltic Sea estuary: regulation and spatial patterns

S. Bonaglia · B. Deutsch · M. Bartoli · H.K. Marchant · V. Brüchert 139

Peat porewater dissolved organic carbon concentration and lability increase with warming: a field temperature manipulation experiment in a poor-fen

E.S. Kane · L.R. Mazzoleni · C.J. Kratz · J.A. Hribljan · C.P. Johnson · T.G. Pypker · R. Chimner 161

Impact of changing atmospheric deposition chemistry on carbon and nutrient loading to Ganga River: integrating land-atmosphere-water components to uncover cross-domain carbon linkages

J. Pandey · U. Pandey · A.V. Singh 179

Sediment microstructure and resuspension behavior depend on each other

A. Kleeberg · C. Herzog 199

Changing climate alters inputs and pathways of mercury deposition to forested ecosystems B.D. Blackwell \cdot C.T. Driscoll \cdot J.A. Maxwell \cdot

T.M. Holsen 215

Effects of simulated increased grazing on carbon allocation patterns in a high arctic mire J.M. Falk · N.M. Schmidt · L. Ström 229

ферту МЕ сетегиное бюджети в у фежфен**ие науки** Центральная изучная б**иблиотека**

Уральского отделения
Российской академии наук (ЦНБ УрО РАН)

Seasonal and geomorphic controls on N and P removal in riparian zones of the US Midwest

X. Liu · P. Vidon · P.-A. Jacinthe · K. Fisher · M. Baker 245

Environmental dynamics of dissolved black carbon in wetlands

Y. Ding \cdot K.M. Cawley \cdot C.N. da Cunha \cdot R. Jaffé **259**

Effects of land use on sources and ages of inorganic and organic carbon in temperate headwater streams

Y.H. Lu · J.E. Bauer · E.A. Canuel · R.M. Chambers · Y. Yamashita · R. Jaffé · A. Barrett 275

Stable nitrogen isotope patterns of trees and soils altered by long-term nitrogen and phosphorus addition to a lowland tropical rainforest

J.R. Mayor · S.J. Wright · E.A.G. Schuur · M.E. Brooks · B.L. Turner 293

Anoxic microniches in marine sediments induced by aggregate settlement: biogeochemical dynamics and implications

N. Lehto · R.N. Glud · G. á Norði · H. Zhang · W. Davison 307

Beryllium-7 as a natural tracer for short-term downwash in peat

S.V. Hansson · J.M. Kaste · K. Chen · R. Bindler 329

Changes to particulate versus mineral-associated soil carbon after 50 years of litter manipulation in forest and prairie experimental ecosystems

K. Lajtha · K.L. Townsend · M.G. Kramer · C. Swanston · R.D. Bowden · K. Nadelhoffer 341

Turnover of DNA-P and phospholipid-P in lake sediments

J.V. Paraskova · P.J.R. Sjöberg · E. Rydin 361

Warming-induced enhancement of soil N_2O efflux linked to distinct response times of genes driving N_2O production and consumption S.A. Billings · L.K. Tiemann 371

Particulate organic matter quality influences nitrate retention and denitrification in stream sediments: evidence from a carbon burial experiment

R.S. Stelzer · J. Thad Scott · L.A. Bartsch · Thomas.B. Parr 387

Influence of weather variables on methane and carbon dioxide flux from a shallow pond

S. Natchimuthu · B. Panneer Selvam · D. Bastviken 403

Source and age of dissolved and gaseous carbon in a peatland–riparian–stream continuum: a dual isotope (^{14}C and $\delta^{13}C$) analysis

F.I. Leith · M.H. Garnett · K.J. Dinsmore · M.F. Billett · K. V. Heal 415

Controls on soil carbon storage and turnover in German landscapes

N. Herold · I. Schöning · B. Michalzik · S. Trumbore · M. Schrumpf 435

Cover Image: Diagram of flow-through microcosm system. Runoff water was air equilibrated in a Mariotte bottle on a stir plate. Water flowed into each microcosm at mid-depth and flowed out to a test tube which overflowed into the waste. The Mariotte bottle and constant height of the test tube ensured a constant flow rate into and out of each microcosm. Three to six microcosms were connected to each Mariotte bottle reservoir.