

# CONTENTS

<b>Robustness of the Estuarine Fish Assessment Index (EFAI) regarding water body definition criteria</b> C.I. Gonçalves, S. Pasquaud, R. Gamito, V.F. Fonseca, J.L. Costa (Lisboa, Portugal), K. Erzini, J.M.S. Gonçalves, J. Martins, L. Leite (Faro, Portugal), N. Castro (Lisboa, Portugal), J.P. Andrade (Faro, Portugal), S. Ramos, A. Bordalo (Porto, Portugal), E. Amorim (Porto, Portugal), J.M. Neto, J.C. Marques (Coimbra, Portugal), M.J. Costa and H. Cabral (Lisboa, Portugal) .....	1
<b>Is a picture worth a thousand species? Evaluating human perception of biodiversity intactness using images of cumulative effects</b> E.M. Bayne, J. Campbell and S. Haché (Edmonton, Canada).....	9
<b>Heavy metal analysis around Murgul (Artvin) copper mining area of Turkey using moss and soil</b> B. Koz (Giresun, Turkey), U. Cevik (Trabzon, Turkey) and S. Akbulut (Rize, Turkey).....	17
<b>Characterizing river habitat quality using plant and animal bioindicators: A case study of Tirino River (Abruzzo Region, Central Italy)</b> A. Testi, G. Fanelli, R. Crosti, V. Castigliani and D. D'Angeli (Roma, Italy) .....	24
<b>Microbial bioindicators of soil functioning after disturbance: The case of gold mining in tropical rainforests of French Guiana</b> H. Schimann, C. Petit-Jean (Kourou Cedex, France), S. Guitet (Cayenne Cedex, France), T. Reis, A.M. Domenach and J.-C. Roggy (Kourou Cedex, France) .....	34
<b>Community congruence of plants, invertebrates and birds in natural and constructed shallow open-water wetlands: Do we need to monitor multiple assemblages?</b> R.C. Rooney and S.E. Bayley (Edmonton, Canada) .....	42
<b>Clarity or confusion? – Problems in attributing large-scale ecological changes to anthropogenic drivers</b> S.M. Smart, P.A. Henrys (Bailrigg, UK), B.V. Purse (Penicuik, UK), J.M. Murphy (Wareham, UK), M.J. Bailey and R.H. Marrs (Wallingford, UK).....	51
<b>Cooling effects of wetlands in an urban region: The case of Beijing</b> R. Sun, A. Chen, L. Chen and Y. Lü (Beijing, China) .....	57
<b>Development of vegetation based soil quality indices for mineralized terrane in arid and semi-arid regions</b> S.W. Blecker, L.L. Stillings (Reno, NV, USA), M.C. Amacher (Logan, UT, USA), J.A. Ippolito (Kimberly, ID, USA) and N.M. DeCrappeo (Corvallis, OR, USA).....	65
<b>Accumulation and toxicity assessment of polychlorinated biphenyls in black-footed albatross (<i>Diomedea nigripes</i>) from Midway Atoll, North Pacific Ocean</b> S.A.L. Caccamise, J. Wang, L. Wu, L.A. Woodward and Q.X. Li (Honolulu, HI, USA).....	75
<b>Simulating urban growth processes incorporating a potential model with spatial metrics</b> F. Kong, H. Yin (Nanjing, China), N. Nakagoshi (Higashi-Hiroshima, Japan) and P. James (Salford, UK).....	82
<b>Effects of eutrophication and exotic crayfish on health status of two Spanish lakes: a joint application of ecological indicators</b> M. Marchi (Siena, Italy), S.E. Jørgensen (Copenhagen, Denmark), E. Bécares, C. Fernández-Aláez, C. Rodríguez, M. Fernández-Aláez (León, Spain), F.M. Pulselli, N. Marchettini and S. Bastianoni (Siena, Italy) .....	92
<b>Meta-analysis of a large data set with Water Framework Directive indicators and calibration of a Benthic Quality Index at the family level</b> P.D. Dimitriou, E.T. Apostolaki, N. Papageorgiou (Crete, Greece), S. Reizopoulou, N. Simboura (Anavissos, Greece), C. Arvanitidis and I. Karakassis (Crete, Greece) .....	101
<b>Selecting the sharpest tools to explore the food-feed-fuel debate: Sustainability assessment of family farmers producing food, feed and fuel in Brazil</b> M.J. Florin, M.K. van Ittersum and G.W.J. van de Ven (Wageningen, Netherlands).....	108

A biological trait approach to assess the functional composition of subtidal benthic communities in an estuarine ecosystem P. van der Linden, J. Patrício (Coimbra, Portugal), A. Marchini (Pavia, Italy), N. Cid (Barcelona, Spain), J.M. Neto and J.C. Marques (Coimbra, Portugal) .....	121
Altitude modifies species richness–nutrient indicator value relationships in a country-wide survey of grassland vegetation S. Güsewell, M. Peter (Zürich, Switzerland) and S. Birrer (Reinach, Switzerland) .....	134
The effects of drought and disturbance on the growth and developmental instability of loblolly pine ( <i>Pinus taeda</i> L.) J.H. Graham (Mount Berry, GA, USA), J.J. Duda (Seattle, WA, USA), M.L. Brown (Detroit, MI, USA), S. Kitchen (Provo, UT, USA), J.M. Emlen (Seattle, WA, USA), J. Malol, E. Bankstahl (Detroit, MI, USA), A.J. Krzysik (Prescott, AZ, USA), H. Balbach (Champaign, IL, USA) and D.C. Freeman (Detroit, MI, USA) .....	143
Modelling the ecosystem indicators of British Columbia using Earth observation data and terrain indices J.L. Fitterer, T.A. Nelson (Victoria, Canada), N.C. Coops (Vancouver, Canada) and M.A. Wulder (Victoria, Canada).....	151
Use of biomonitors for the identification of heavy metals emission sources E.D. Wannaz, H.A. Carreras, J.H. Rodriguez and M.L. Pignata (Córdoba, Argentina) .....	163
Spatial pattern of non-stationarity and scale-dependent relationships between NDVI and climatic factors— A case study in Qinghai-Tibet Plateau, China Y. Gao, J. Huang, S. Li and S. Li (Beijing, China) .....	170
Establishing expectations for pan-European diatom based ecological status assessments M.G. Kelly (Durham, UK), C. Gómez-Rodríguez (Vigo, Spain), M. Kahlert (Uppsala, Sweden), S.F.P. Almeida (Aveiro, Portugal), C. Bennett (Aberdeen, UK), M. Bottin, F. Delmas (Gazinet, France), J.-P. Descy (Namur, Belgium), G. Dörflinger (Namur, Cyprus), B. Kennedy (Namur, Ireland), P. Marvan (Namur, Czech Republic), L. Opatrilova (Praha, Czech Republic), I. Pardo (Vigo, Spain), P. Pfister (Innsbruck, Austria), J. Rosebery (Gazinet, France), S. Schneider (Oslo, Norway) and S. Vilbaste (Tartu, Estonia).....	177
Use of single versus multiple biotic communities as indicators of biological integrity in northern prairie wetlands M.J. Wilson and S.E. Bayley (Edmonton, Canada) .....	187
Terricolous lichens as indicators of nitrogen deposition: Evidence from national records C.J. Stevens, S.M. Smart, P.A. Henrys, L.C. Maskell, A. Crowe (, UK), J. Simkin (London, UK), C.M. Cheffings, C. Whitfield (Peterborough, UK), D.J.G. Gowing (, UK), E.C. Rowe, A.J. Dore and B.A. Emmett (Peterborough, UK) .....	196
Energy degradation and ecosystem development: Theoretical framing, indicators definition and application to a test case study A. Ludovisi (Perugia, Italy) .....	204
Bringing new knowledge to an old problem: Building a biotic index from lotic macroinvertebrate traits K.A. Monaghan and A.M.V.M. Soares (Aveiro, Portugal) .....	213
Interpreting outputs of agent-based models using abundance–occupancy relationships T.T. Høye (Rønne, Denmark), F. Skov and C.J. Topping (Rønne, Denmark).....	221
Development of a dairy cattle drinking water quality index (DCWQI) based on fuzzy inference systems H. Gharibi, M.H. Sowlat, A.H. Mahvi (Tehran, Iran), H. Mahmoudzadeh, H. Arabalibeik, M. Keshavarz, N. Karimzadeh and G. Hassani (Tehran, Iran).....	228
Alternative ways to use and evaluate Kohler's ordinal scale to assess aquatic macrophyte abundance A.I. Engloner (, Hungary) .....	238
Fluoride bioaccumulation in the signal crayfish <i>Pacifastacus leniusculus</i> (Dana) as suitable bioindicator of fluoride pollution in freshwater ecosystems C. Gonzalo and J.A. Camargo (Alcalá de Henares, Spain) .....	244
Application of a versatile aquatic macrophyte integrity index for Minnesota lakes P. Radomski and D. Perleberg (Brainerd, MN, USA) .....	252
Tracking the effect of climate change on ecosystem functioning using protected areas: Africa as a case study N. Pettorelli, A.L.M. Chauvenet (London, Berkshire, UK), J.P. Duffy, W.A. Cornforth, A. Meillere and J.E.M. Baillie (London, UK) .....	269
Bryophyte cover on trees as proxy for air humidity in the tropics D.N. Karger, J. Kluge, S. Abrahamczyk (Zurich, Switzerland), L. Salazar, J. Homeier (Göttingen, Germany), M. Lehnert (Stuttgart, Germany), V.B. Amoroso (Bukidnon, Philippines) and M. Kessler (Zurich, Switzerland) .....	277

*(Contents continued from outside back cover)*

Quantitative evaluation of effects of the soft interventions or cleaner production in households and the hard interventions: A Social Experiment Programme in a large river basin in Japan Y. Tsuzuki (Matsue, Japan), M. Yoneda, R. Tokunaga and S. Morisawa (Kyoto, Japan) .....	282
A new biological indicator to assess the ecological status of Mediterranean trout type streams D. Ayllón, A. Almodóvar (Madrid, Spain), G.G. Nicola (Toledo, Spain), I. Parra and B. Elvira (Madrid, Spain) .....	295
A test for assessment of saproxylic beetle biodiversity using subsets of “monitoring species” P. Sebek (Brno, Czech Republic), T. Barnouin (Brno, France), A. Brin, H. Brustel, M. Dufrêne (Toulouse, Belgium), F. Gosselin (, France), B. Meriguet (Toulouse, France), L. Micas, T. Noblecourt, O. Rose, L. Velle (Brno, France) and C. Bouget (, France) .....	304
Cattle-raising and public credit in rural settlements in Eastern Amazon P.F. da S. Martins and T.Z. da S. Pereira (Belém, Brazil) .....	316
A method for assessing the ecological quality of riparian forests in subtropical Andean streams: QBRy index M.G. Sirombra (, Argentina) and L.M. Mesa (Santa Fe, Argentina) .....	324
Multi-scale evaluation of soil functional indicators for the assessment of water and soil retention in Mediterranean semiarid landscapes Á.G. Mayor (Paterna, Spain and Utrecht, The Netherlands) and S. Bautista (Alicante, Spain) .....	332
Orthoptera as ecological indicators for succession in steppe grassland T. Fartmann, B. Krämer, F. Stelzner and D. Poniatowski (Münster, Germany) .....	337
A preliminary study toward an index based on coralligenous assemblages for the ecological status assessment of Mediterranean French coastal waters J. Deter (Carnon, Montpellier, France), P. Descamp, L. Ballesta (Carnon, France), P. Boissery (Marseille, France) and F. Holon (Carnon, France) .....	345