

Current Awareness Service

Contents of Selected Journals

Vol. 4 No. 10&11

October/ November 2014



Library & Documentation Centre
Central Marine Fisheries Research Institute
P.B.No.1603, Cochin - 682 018, Kerala

Contents of Selected Journals

October/November 2014



Library & Documentation Centre

CMFRI, Cochin - 18

Contents

Sl. No.	Title	Vol./No.	Mon./Yr	Page No.
1	Aquaculture	432	Aug'14	1-3
2	Aquaculture	433	Sep'14	4-7
3	Aquaculture Research	45 (10)	Sep'14	8
4	Canadian J. of Agriculture Economics	62 (3)	Sep'14	9-10
5	Canadian J. of Fisheries and Aquatic Sciences	71 (6)	Jun '14	11-12
6	Canadian J. of Fisheries and Aquatic Sciences	71 (8)	Aug '14	13-14
7	Crustaceana	87 (8-9)	Aug '14	15-16
8	Crustaceana	87 (10)	Sep '14	17-18
9	Fish and Shellfish Immunology	40 (2)	Oct '14	19-20
10	Fishing Chimes	34 (4)	Jul '14	21-22
11	Fishing Chimes	34 (5&6)	Aug/Sep '14	23
12	ICES Journal of Marine Science	71 (6)	Sep'14	24-25
13	ICES Journal of Marine Science	71 (7)	Sep/Oct'14	26-28
14	Journal of Crustacean Biology	34 (5)	Sep'14	29-30
15	Journal of Fish Biology	85 (3)	Sep '14	31-32
16	Journal of Fish Diseases	37 (10)	Oct '14	33
17	Molluscan Research	34 (3)	Aug '14	34
18	North American J. of Fisheries Management	34 (4)	Aug '14	35
 <i>New Additions to Library</i>				
20	Periodicals			36-37



Aquaculture

VOL. 432

CONTENTS

20 AUGUST 2014

(Abstracts/contents list published in: *Aquatic Science and Fisheries Abstracts, Biological Abstracts, Elsevier BIOBASE/Current Awareness in Biological Sciences, Current Contents A, B & ES, EMBiology, Environment Abstracts, Freshwater and Aquaculture Contents Tables, Geo Abstracts, Geobase, Marine Science Contents Tables, Zoological Record*). Also covered in the abstract and citation database Scopus®.
Full text available in ScienceDirect®

Special Section on 6th Fish and Shellfish Larviculture Symposium "Larvi 2013" Edited by Olav Vadstein, Amos Tandler, Luis Conceição, Patrick Sorgeloos, Peter Bossier

Special Section on 6th Fish & Shellfish Larviculture symposium LARVI'13 held at Ghent University, Belgium on September 2- 5, 2013 O. Vadstein, A. Tandler, L. Conceição, P. Sorgeloos and P. Bossier	373
New formulated diets for <i>Solea senegalensis</i> broodstock: Effects of parental nutrition on biosynthesis of long-chain polyunsaturated fatty acids and performance of early larval stages and juvenile fish S. Morais (Sant Carles de la Rápita, Spain), A.C. Mendes (Olhão, Portugal), M.F. Castanheira (Campus de Gambelas, Faro, Portugal), J. Coutinho, N. Bandarra (Lisboa, Portugal), J. Dias, L.E.C. Conceição (Faro, Olhão, Portugal) and P. Pousão-Ferreira (Olhão, Portugal)	374
Thermally-induced phenotypic plasticity in gilthead seabream <i>Sparus aurata</i> L. (Perciformes, Sparidae) M. Loizides (Crete, Greece), E. Georgakopoulou (Patras, Greece), M. Christou, M. Iliopoulos, I. Papadakis, P. Katharios, P. Divanach and G. Koumoundouros (Crete, Greece)	383
Factors enhancing fish sperm quality and emerging tools for sperm analysis E. Cabrita (Faro, Portugal; Cádiz, Spain), S. Martínez-Páramo, P.J. Gavaia (Faro, Portugal), M.F. Riesco, D.G. Valcarce (León, Spain), C. Sarasquete (Cádiz, Spain), M.P. Herráez and V. Robles (León, Spain)	389
Larval development of indigenous South American freshwater fish species, with particular reference to pacu (<i>Piaractus mesopotamicus</i>): A review M.C. Portella (Jaboticabal, Brazil), R.K. Jomori (Ituverava, Brazil), N.J. Leitão, O.C.C. Menossi, T.M. Freitas, J.T. Kojima, T.S. Lopes (Jaboticabal, Brazil), J.A. Clavijo-Ayala (Bauru, Brazil) and D.J. Carneiro (Jaboticabal, Brazil)	402
Molecular regulation of muscle development and growth in Senegalese sole larvae exposed to temperature fluctuations C. Campos (Porto, Faro, Portugal; Bodø, Norway), L.M.P. Valente (Porto, Portugal), L.E.C. Conceição, S. Engrola (Faro, Portugal) and J.M.O. Fernandes (Bodø, Norway)	418
Nanoparticles as a novel delivery system for vitamin C administration in aquaculture E. Jiménez-Fernández (Cádiz, Spain), A. Ruyra, N. Roher (Barcelona, Spain), E. Zuasti, C. Infante and C. Fernández-Díaz (Cádiz, Spain)	426
Myosin light chain 2 isoforms in gilthead sea bream (<i>Sparus aurata</i> L.): Molecular growth markers at early stages S. Georgiou, P. Makridis, D. Dimopoulos (Larissa, Crete, Achladi Phiotida, Greece), D.M. Power (Faro, Portugal), Z. Mamuris, and K.A. Moutou (Larissa, Greece)	434
The effects of dietary arachidonic acid on Senegalese sole morphogenesis: A synthesis of recent findings A. Boglino (Tarragona, Spain), A. Wishkerman (Tarragona, Spain; Israel), M.J. Darias (Montpellier, France), P. de la Iglesia, A. Estévez, K.B. Andree and E. Gisbert (Tarragona, Spain)	443
Dietary LC-PUFA deficiency early in ontogeny induces behavioural changes in pike perch (<i>Sander lucioperca</i>) larvae and fry I. Lund, E. Höglund (Hirtshals, Denmark), L.O.E. Ebbesson (Bergen, Norway) and P.V. Skov (Hirtshals, Denmark)	453
Relationship between uninflated swim bladder and skeletal anomalies in reared gilthead seabream (<i>Sparus aurata</i>) L. Prestinicola, C. Boglione and S. Cataudella (Rome, Italy)	462

Visit the Elsevier Aquaculture Website today!

New FREE Online Features:

- Table of Contents NOW WITH ABSTRACTS
- Full Search on Abstracts, Authors and Keywords
- Author and Subject Index

Bookmark: <http://www.elsevier.com/locate/aqua-online>
or <http://www.elsevier.com/locate/aqua-online>



0044-8486(20140820)432C:1-A

(contents continued from back cover)

Euryhaline rotifer <i>Proales similis</i> as initial live food for rearing fish with small mouth	470
Selection and characterization of potential probiotic bacteria for <i>Litopenaeus stylirostris</i> shrimp hatcheries in New Caledonia D. Phama, D. Ansquer, A. Chevalier, C. Dauga, A. Peyramale, N. Wabete (Nouméa cedex, New Caledonia) and Y. Labreuche (Plouzané, Roscoff cedex, France)	475
RAS and microbial maturation as tools for K-selection of microbial communities improve survival in cod larvae K.J.K. Attramadal, T.M.H. Truong, I. Bakke, J. Skjermo, Y. Olsen and O. Vadstein (Trondheim, Norway)	483
Diseases	
Multilocus sequence typing revealed a clonal lineage of <i>Aeromonas hydrophila</i> caused motile <i>Aeromonas</i> septicemia outbreaks in pond-cultured cyprinid fish in an epidemic area in central China X. Zhang (Wuhan, Beijing, PR China), W. Yang (Wuhan, PR China), H. Wua, X. Gong and A. Li (Wuhan, PR China)	1
The seasonal changes of innate immunity of tench, <i>Tinca tinca</i> (L.) with different ploidy level S. Tolarová, M. Dávidová, A. Šimková (Brno, Czech Republic), M. Flajšhans (Vodňany, Czech Republic) and P. Hyršl (Brno, Czech Republic)	46
Chromium carbochelate dietary supplementation favored the glucocorticoid response during acute inflammation of <i>Piaractus mesopotamicus</i> M.P. de Castro, G.S. Claudiano, N.L. Bortoluzzi, E. Garrido, R.Y. Fujimoto, M.A.A. Belo, M.T. Shimada, J.R.E. Moraes and F. R. Moraes (Jaboticabal, Sergipe, Brazil)	114
Outbreak of a novel disease associated with <i>Vibrio mimicus</i> infection in fresh water cultured yellow catfish, <i>Pelteobagrus fulvidraco</i> X. Zhang, Y.-W. Li, Z.-Q. Mo, X.-C. Luo, H.-Y. Sun, P. Liu, A.-X. Li (Guangzhou, PR China), S.-M. Zhou (Ningbo, PR China) and X.-M. Dan (Guangzhou, PR China)	119
Effect of lysozyme addition on the activity of phages against <i>Vibrio parahaemolyticus</i> L. Mateus, L. Costa, Y.J. Silva, C. Pereira and A. Almeida (Portugal)	125
Efficacy of deltamethrin in the control of <i>Caligus rogercresseyi</i> (Boxshall and Bravo) using bath treatment S. Bravo, M. Sepulveda, M.T. Silva (Puerto Montt, Chile) and M.J. Costello (Auckland, New Zealand)	175
Evaluation of dietary freeze-dried <i>Chaetoceros calcitrans</i> supplementation to control <i>Vibrio harveyi</i> infection on <i>Penaeus monodon</i> juvenile E.B. Seraspe, S. Gabotero, M.R. De la Peña, I.G. Pahila and E.C. Amar (Iloilo, Philippines)	212
Assessment of the impact of a pathogen, <i>Bonamia ostreae</i> , on <i>Ostrea edulis</i> oyster stocks with different histories of exposure to the parasite in Ireland G. Flannery, S.A. Lynch (Cork, Ireland), J. Carlsson (Dublin, Ireland), T.F. Cross and S.C. Culloty (Cork, Ireland)	243
Development of a new cell line from the snout of giant grouper, <i>Epinephelus lanceolatus</i> (Bloch), and its application in iridovirus and nodavirus pathogenesis Y. Huang, X. Huang, Z. Ouyang, S. Wei, C. Guo and Q. Qin (Guangzhou, China)	265
Genetics	
Validation of linked QTL for bacterial cold water disease resistance and spleen size on rainbow trout chromosome Omy19 R.L. Vallejo, Y. Palti, S. Liu, D.P. Marancik and G.D. Wiens (Kearneysville, WV, USA)	139
Parental contribution and spawning performance in captive common snook <i>Centropomus undecimalis</i> broodstock N.R. Rhody, C. Puchulutegui (Sarasota, St. Petersburg, FL, USA), J.B. Taggart (Scotland, UK), K.L. Main (Sarasota, FL, USA) and H. Migaud (Scotland, UK)	144
Nutrition	
Evaluation of grain distillers dried yeast as a fish meal substitute in practical-type diets of juvenile rainbow rout, <i>Oncorhynchus mykiss</i> B.S. Hauptman, F.T. Barrows (Bozeman, MT, USA), S.S. Block (Decatur, IL, USA), G. Gaylorda, J.A. Paterson, S.D. Rawles and W.M. Sealey (Bozeman, MT, Stuttgart, AR USA)	7
Dietary magnesium requirement of soft-shelled turtles, <i>Pelodiscus sinensis</i> , fed diets containing exogenous phytate C.-Y. Chen, S.-M. Chen and C.-H. Huang (Chiayi, Taiwan)	80
Investigation of the effects of dietary protein source on copper and zinc bioavailability in fishmeal and plant-based diets for rainbow trout E.S. Read, F.T. Barrows, T. Gibson Gaylorda, J. Paterson, M.K. Petersen and W.M. Sealey (Bozeman, Miles City, MT, USA)	97
Interactive effects of dietary valine and leucine on two sizes of Japanese flounder <i>Paralichthys olivaceus</i> Y. Han (Kagoshima, Japan), R. Han (Liaoyang, China), S. Koshio, M. Ishikawa, S. Yokoyama (Kagoshima, Japan) and J. Gao (Wuhan, China)	130
Conjugated linoleic acid differentially modulates growth, tissue lipid deposition, and gene expression involved in the lipid metabolism of grass carp G.-F. Dong, Q. Zou, H. Wang, F. Huang, X.-C. Liu, L. Chen, C.-Y. Yang and Y.-o. Yang (Wuhan, Hefei, China)	181
Single or combined effects of fructo- and mannan oligosaccharide supplements on the growth performance, nutrient digestibility, immune responses and stress resistance of juvenile narrow clawed crayfish, <i>Astacus leptodactylus</i> <i>leptodactylus</i> Eschscholtz, 1823 O. Safari, D. Shahsavani (Mashhad, Iran), M. Paolucci (Benevento, Italy) and M.M.S. Atash (Mashhad, Iran)	192

(contents continued)

Efficacy and tolerance of yeast cell wall as an immunostimulant in the diet of Japanese seabass (<i>Lateolabrax japonicus</i>) H.H. Yu, F. Han, M. Xue, J. Wang (Beijing, China), P. Tacon (Marcq en Baroeul, France), Y.H. Zheng, X.F. Wu and Y.J. Zhang (Beijing, Shandong, China)	217
Evaluation of <i>Lactobacillus plantarum</i> as feed supplement on host associated microflora, growth, feed efficiency, carcass biochemical composition and immune response of giant freshwater prawn, <i>Macrobrachium rosenbergii</i> (de Man, 1879) G. Dash, R.P. Raman, K. Pani Prasad, M. Makesh, M.A. Pradeep and S. Sen (Veraval, Mumbai, Cochin, India)	225
Effects of dietary mannan oligosaccharide supplementation on juvenile spiny lobster <i>Panulirus homarus</i> (Palinuridae) H. Do Huu (Nha Trang, Viet Nam) and C.M. Jones (Cairns, QLD, Australia)	258
Feeding effect of selenium enriched rotifers on larval growth and development in red sea bream <i>Pagrus major</i> H.-J. Kim, Y. Sakakura, I. Maruyama, T. Nakamura, K. Takiyama, H. Fujiki and A. Hagiwara (Nagasaki, Fukuoka, Japan) ...	273
Effects of dietary phytosterols and soy saponins on growth, feed utilization efficiency and intestinal integrity of gilthead sea bream (<i>Sparus aurata</i>) juveniles A. Couto (Porto, Portugal), T.M. Kortner, M. Pennic, A.M. Bakke, Å. Krogdahl (Oslo, Norway) and A. Oliva-Teles (Porto, Portugal)	295
Dietary chromium polynicotinate enhanced growth performance, feed utilization, and resistance to <i>Cryptocaryon irritans</i> in juvenile large yellow croaker (<i>Larimichthys crocea</i>) J. Wang, Q. Ai, K. Mai, H. Xu and R. Zuo (Qingdao, Guangzhou, China)	321
Dietary copper requirements of juvenile large yellow croaker <i>Larimichthys croceus</i> J. Cao, X. Miao (China), W. Xu, J. Li, W. Zhang and K. Mai (Qingdao, PR China)	346
Dietary zinc requirements of juvenile grouper, <i>Epinephelus malabaricus</i> C. Houng-Yung, C. Yu-Chun, H. Li-Chi and C. Meng-Hsien (Kaohsiung, Taiwan)	360
Protein levels for <i>Litopenaeus vannamei</i> in semi-intensive and biofloc systems A. Jatobá, B.C. da Silva (Araquari, Florianópolis, Brazil), J.S. da Silva, F.d.N. Vieira, J.L.P. Mourão, W.Q. Seiffert and T.M. Toledo (Brazil)	365
Physiology and Endocrinology: Fish	
Triploid Atlantic salmon growth is negatively affected by communal ploidy rearing during seawater grow-out in tanks J.F. Taylor, P. Bozzolla, B. Frenzl, C. Matthew, D. Hunter and H. Migaud (Scotland, Fort William, UK)	163
Sound production in <i>Sciaenops ocellatus</i> : Preliminary study for the development of acoustic cues in aquaculture E. Parmentier, J. Tock (Liège, Belgium), J.-C. Falguière and M. Beauchaud (Martinique, Saint-Etienne cedex, Orsay, France)	204
Physiology and Endocrinology: Molluscs and Crustaceans	
Effects of severe heat stress on immune function, biochemistry and histopathology in farmed Australian abalone (hybrid <i>Haliotis laevigata</i> × <i>Haliotis rubra</i>) C. Hooper, R. Day, R. Slocombe, K. Benkendorff, J. Handlinger (Melbourne, Vic, Lismore, NSW, Launceston, Tasmania, Australia) and J. Goulias (Plouzané, France)	26
Stimulation of ovarian development in white shrimp, <i>Fenneropenaeus merguiensis</i> De Man, with a recombinant ribosomal protein L10a (Songkhla, Satun, Thailand)	38
Cryopreservation of sperm from wild greenlip abalone (<i>Haliotis laevigata</i>) in Australia W. Zhu (Dalian, China), X. Li (West Beach, South Australia, Australia), D. Qu (Dalian, China), Y. Liu and S. Clarke (West Beach, South Australia, Australia)	60
Genome-wide discovery and in silico mapping of gene-associated SNPs in Nile tilapia J.H. Xia, Z.Y. Wan, Z.L. Ng, L. Wang, G.H. Fu, G. Lin, F. Liu (Singapore) and G.H. Yue (Singapore, Republic of Singapore) ...	67
Accumulation of docosapolyenoic fatty acids in developing oocytes of the winged pearl oyster <i>Pteria sterna</i> M. Hawkyns-Martínez (Santa Marta, Colombia), P. E. Saucedo, L. Carreón-Palau, E. Gómez-Robles and H. Acosta-Salmón (La Paz, Mexico)	74
Cloning and expression analysis of apolipoprotein A-I (ApoA-I) in the Hong Kong grouper (<i>Epinephelus akaara</i>) M. Qu, X. Huang, X. Zhang, Q. Liu and S. Ding (Xiamen, China)	85
Effect of florfenicol on selected parameters of immune and antioxidant systems, and damage indexes of juvenile <i>Litopenaeus vannamei</i> following oral administration X. Ren, L. Pan and L. Wang (Qingdao, China)	106
Defensive strategies in response to environmental ammonia exposure of the sea cucumber <i>Apostichopus japonicus</i> : Glutamine and urea formation G. Wang, L. Pan and Y. Ding (Qingdao, PR China)	278
Characterization and expression analysis of <i>Cyclin-dependent kinase 7</i> gene and protein in ovaries of the giant tiger shrimp <i>Penaeus monodon</i> M. Phinyo, P. Nounurai, R. Hiransuchalert, P. Jarayabhand (Thailand) and S. Klinbunga (Bangkok, Pathum Thani, Chanthaburi, Thailand)	286
Physiological changes in Pacific oyster <i>Crassostrea gigas</i> exposed to the herpesvirus OsHV-1μVar D. Tamayo (Plouzané, France; Bilbao, Spain), C. Corporeau, B. Petton, C. Quere and F. Pernet (Plouzané, France)	304

Aquaculture

VOL. 433

CONTENTS

20 SEPTEMBER 2014

(Abstracts/contents list published in: *Aquatic Science and Fisheries Abstracts*, *Biological Abstracts*, *Elsevier BIOBASE/Current Awareness in Biological Sciences*, *Current Contents A, B & ES*, *EMBiology*, *Environment Abstracts*, *Freshwater and Aquaculture Contents Tables*, *Geo Abstracts*, *Geobase*, *Marine Science Contents Tables*, *Zoological Record*). Also covered in the abstract and citation database *Scopus®*.
Full text available in *ScienceDirect®*

Diseases

Use of plant extracts in fish aquaculture as an alternative to chemotherapy: Current status and future perspectives M. Reverter (Moorea, French Polynesia; Perpignan, France), N. Bontemps (Perpignan, France), D. Lecchini (Moorea, French Polynesia), B. Banaigs (Perpignan, France) and P. Sasal (Moorea, French Polynesia)	50
Outbreaks of vibriosis associated with <i>Vibrio mimicus</i> in freshwater catfish in China Y. Geng, D. Liu, S. Han, Y. Zhou, K.Y. Wang, X.L. Huang, D.F. Chen, X. Peng and W.M. Lai (Ya'an, China)	82
Synergy of herbal ingredients combination against <i>Dactylogyrus</i> spp. in an infected goldfish model for monogenean management C. Jiang, Z.-Q. Wu, L. Liu, G.-L. Liu and G.-X. Wang (Yangling, PR China)	115
Shirazi thyme (<i>Zataria multiflora</i>) essential oil suppresses the expression of the <i>epsD</i> capsule gene in <i>Lactococcus garvieae</i> , the cause of lactococciosis in farmed fish M. Soltani, S. Mohamadian, H.A. Ebrahimzahe-Mousavi, S. Mirzargar, A. Taheri-Mirghaed, S. Rouholahi and M. Ghodratnama (Tehran, Iran)	143
Characterization of a primary cell culture from lymphoid organ of <i>Litopenaeus vannamei</i> and use for studies on WSSV replication W. Li (Belgium), V.T. Nguyen, M. Corteel, J.J. Dantas-Lima, K. Van Thuong, V. Van Tuan, P. Bossier, P. Sorgeloos and H. Nauwynck (Belgium)	157
Effects of daily temperature fluctuation on the survival of carp infected with <i>Cyprinid herpesvirus 3</i> T. Takahara, M.N. Honjo (Japan), K. Uchii (Meguro-ku, Japan), T. Minamoto (Japan), H. Doi (Higashi-Hiroshima, Japan), T. Ito (Tamaki, Japan) and Z. Kawabata (Japan)	208
Diversity of <i>Vibrio parahaemolyticus</i> associated with disease outbreak among cultured <i>Litopenaeus vannamei</i> (Pacific white shrimp) in India B.K. Kumar, V.K. Deekshit, J.R.M. Raj, P. Rai (Mangalore, India), B.M. Shivanagowda (Guntur District, India), I. Karunasagar and I. Karunasagar (Mangalore, India)	247
Epidemiology of Piscirickettsiosis on selected Atlantic salmon (<i>Salmo salar</i>) and rainbow trout (<i>Oncorhynchus mykiss</i>) salt water aquaculture farms in Chile E. Jakob, H. Stryhn, J. Yu (Charlottetown PEI, Canada), M.H. Medina (Puerto Montt, Chile), E.E. Rees, J. Sanchez and S. St-Hilaire (Charlottetown PEI, Canada)	288
A probiotic <i>Enterobacter</i> sp. provides significant protection against <i>Flavobacterium psychrophilum</i> in rainbow trout (<i>Oncorhynchus mykiss</i>) after injection by two different routes S.E. LaPatra (Buhl, ID, USA), T.R. Fehringer and K.D. Cain (Moscow, ID, USA)	361
Immunomodulatory effect of recombinant <i>Macrobrachium rosenbergii</i> nodavirus capsid protein (r-MCP) against white tail disease of giant freshwater prawn, <i>Macrobrachium rosenbergii</i> (de Man, 1879) M.A. Farook, N. Sundar Raj, N. Madan, S. Vimal, S. Abdul Majeed, G. Taju, T. Rajkumar, S. Santhoshkumar, S. Sivakumar and A.S. Sahul Hameed (India)	395
Deltamethrin (AlphaMax™) reveals modulation of genes related to oxidative stress in the ectoparasite <i>Caligus rogercresseyi</i> : Implications on delousing drug effectiveness J. Chavez-Mardones and C. Gallardo-Escárate (Concepción, Chile)	421

(continued on last page of this issue)

Visit the Elsevier Aquaculture Website today!

New FREE Online Features:

- Table of Contents NOW WITH ABSTRACTS
- Full Search on Abstracts, Authors and Keywords
- Author and Subject Index

Bookmark: <http://www.elsevier.com/locate/aqua-online>
or <http://www.elsevier.com/locate/aqua-online>



0044-8486(20140920)433C:1-4

(contents continued from back cover)

- Antioxidant and antibacterial activity of *Chaetomorpha antennina* against shrimp pathogen *Vibrio parahaemolyticus*
S. Thanigaivel, S. Vijayakumar, A. Mukherjee, N. Chandrasekaran and J. Thomas (Vellore, India) 467

Genetics

- Screening and characterization of sex-linked DNA markers and marker-assisted selection in the Nile tilapia (*Oreochromis niloticus*)
Y.-L. Sun, D.-N. Jiang, S. Zeng, C.-J. Hu, K. Ye, C. Yang, S.-J. Yang, M.-H. Li and D.-S. Wang (Chongqing, PR China) 19
- Linkage mapping of the blond locus in Nile tilapia (*Oreochromis niloticus* L.) and preliminary analysis of its effect on blotching in red Nile tilapia
A.H. Rajaei, C. Palaiokostas, V.P. Saini, B.J. McAndrew and D.J. Penman (Stirling, United Kingdom) 28
- Regional population structure and management of aquaculture for stock enhancement of the spotted seatrout (*Cynoscion nebulosus*)
C.R. Somerset and E.A. Saillant (Ocean Springs, MS, USA) 66
- Growth performance comparison of intercross-triploid, induced triploid, and diploid rainbow trout
G.M. Weber, M.A. Hostettler, B.M. Cleveland and T.D. Leeds (Kearneysville, WV, USA) 85
- An industry friendly, inexpensive DNA extraction method for Penaeid shrimp that is compatible with Sequenom®iPLEX Platinum SNP pedigree genotyping platforms
L. Dierens (Qld, Australia), J. Henshall (Armidale, NSW, Australia) and M. Sellars (Qld, Australia) 102
- Genetic co-variation between resistance against both *Caligus rogercresseyi* and *Piscirickettsia salmonis*, and body weight in Atlantic salmon (*Salmo salar*)
J.M. Yáñez (Santiago, Puerto Montt, Chile), J.P. Lhorente (Puerto Montt, Chile), L.N. Bassini (Puerto Montt, Santiago, Chile), M. Oyarzún (Puerto Montt, Chile), R. Neira (Puerto Montt, Santiago, Chile) and S. Newman (Hendersonville, TN, USA) 295
- Genetic diversity and pedigree assignment in tetraploid Pacific oysters (*Crassostrea gigas*)
P.A. Miller (Hobart, Adelaide, Tasmania, South Australia, Australia), N.G. Elliott, R.E. Vaillancourt, P.D. Kube and A. Koutoulis (Hobart, Tasmania, Australia) 318

Nutrition

- Effect of carbon monoxide for Atlantic salmon (*Salmo salar* L.) slaughtering on stress response and fillet shelf life
A. Concollato (Firenze, Padova, Italy), G. Parisi (Firenze, Italy), R.E. Olsen, B.O. Kvamme, E. Slinde (Bergen, Norway) and A. Dalle Zotte (Padova, Italy) 13
- Dietary inclusion of salmon testes meal from Alaskan seafood processing byproducts: Effects on growth and immune function of rainbow trout, *Oncorhynchus mykiss* (Walbaum)
T.R. Fehringer (Moscow, ID, USA), R.W. Hardy (Hagerman, ID, USA) and K.D. Cain (Moscow, ID, USA) 34
- Effect of dietary substitution of fish oil with flaxseed or sunflower oil on muscle fatty acid composition in juvenile steelhead trout (*Oncorhynchus mykiss*) reared at varying temperatures
M.P.A. Wijekoon, C.C. Parrish and A. Mansour (St. John's, NL, Canada) 74
- Size-related differences in growth and survival in piscivorous fish larvae fed different prey types
P. Reglero (Palma de Mallorca, Spain), A. Ortega (Puerto de Mazarrón, Spain), E. Blanco (Palma de Mallorca, Spain), Ø. Fiksen (Bergen, Norway), F.J. Viguri (Cartagena, Spain), F. de la Gándara (Puerto de Mazarrón, Spain), M. Seoka (Cartagena, Spain) and A. Folkvord (Bergen, Norway) 94
- Estimation of optimum docosahexaenoic to eicosapentaenoic acid ratio (DHA/EPA) for juvenile starry flounder, *Platichthys stellatus*
J. Ma, J. Wang, D. Zhang (Yantai, PR China), T. Hao, J. Sun (Yantai, Shanghai, PR China), Y. Sun and L. Zhang (Yantai, PR China) ... 105
- The use of stable isotopes to investigate the effects of supplemental lysine and methionine on protein turnover and amino acid utilization in pacu, *Piaractus mesopotamicus*, juveniles
E.G. Abimorad (Votuporanga, Brazil), C. Ducatti (Botucatu, Brazil), D. Castellani (Votuporanga, Brazil), R.K. Jomori (Ituverava, Brazil), M.C. Portella and D.J. Carneiro (Jaboticabal, Brazil) 119
- Stable isotopes reveal live prey support growth of juvenile channel catfish reared under intensive feeding regimens in ponds
J.E. Filbrun and D.A. Culver (Columbus, OH, USA) 125
- Effect of ration level and dietary docosahexaenoic acid content on the requirements for long-chain polyunsaturated fatty acids by juvenile barramundi (*Lates calcarifer*)
K.M. Morton, D. Blyth, N. Bourne, S. Irvin and B.D. Glencross (Brisbane, Australia) 164
- Benefits of probiotic administration on growth and performance along metamorphosis and weaning of Senegalese sole (*Solea senegalensis*)
C. Lobo, S. Tapia-Paniagua (Santander, Spain), X. Moreno-Ventas (Málaga, Spain), F.J. Alarcón (Almería, Spain), C. Rodríguez (La Laguna, Spain), M.C. Balebona, M.A. Moriñigo and I.G. de La Banda (Santander, Spain) 183
- Dietary methionine supplementation alters the expression of genes involved in methionine metabolism in salmonids
K. Kwasek (Columbus, OH, USA; Varese, Italy), G. Terova (Varese, Italy), B.-J. Lee (Columbus, OH, USA; Pohang, South Korea), E. Bossi, M. Saroglia (Varese, Italy) and K. Dabrowski (Columbus, OH, USA) 223
- Toxic effects of excessive levels of dietary selenium in juvenile yellowtail kingfish (*Seriola lalandi*)
K.T. Le and R. Fotedar (Bentley, WA, Australia) 229
- Dietary phenylalanine requirement and tyrosine replacement value for phenylalanine for fingerling *Catla catla* (Hamilton)
S. Zehra and M.A. Khan (Aligarh, India) 256

(contents continued)

Senegalese sole (<i>Solea senegalensis</i>) metamorphic larvae are more sensitive to pseudo-albinism induced by high dietary arachidonic acid levels than post-metamorphic larvae A. Boglino (Tarragona, Spain), A. Wishkerman (Tarragona, Spain; Michmoret, Israel), M.J. Darias (Montpellier Cedex 5, France), P. de la Iglesia, K.B. Andree, E. Gisbert and A. Estévez (Tarragona, Spain)	276
Deep sequencing of the tilapia (<i>Oreochromis niloticus</i>) liver transcriptome response to dietary protein to starch ratio Y. Xiong, J. Huang, X. Li, L. Zhou, F. Dong, H. Ye and L. Gan (Guangzhou, China)	299
Grape seed extract and dried macroalgae, <i>Ulva lactuca</i> Linnaeus, improve survival of greenlip abalone, <i>Haliotis laevigata</i> Donovan, at high water temperature B. Lange (SA, Australia), K.-L. Currie (Adelaide, SA, Australia), G.S. Howarth (North Adelaide, SA, Australia) and D.A.J. Stone (Adelaide, SA, Australia)	348
Growth and quality of Atlantic cod (<i>Gadus morhua</i>) fed with high and low fat diets supplemented with glutamate I.A. Ingebrigtsen (Oslo, Norway), G.M. Berge (Sunndalsøra, Norway), B. Ruyter, M.A. Kjær, T. Mørkøre (Norway), M. Sørensen (University of Nordland, Bodø) and T. Gjøen (Oslo, Norway)	367
Effects of dietary astaxanthin and xanthophylls on the growth and skin pigmentation of large yellow croaker <i>Larimichthys croceus</i> X. Yi, W. Xu, H. Zhou, Y. Zhang, Y. Luo, W. Zhang and K. Mai (Qingdao, PR China)	377
Recovery growth of <i>Cherax quadricarinatus</i> juveniles fed on two high-protein diets: Effect of daily feeding following a cyclic feeding period on growth, biochemical composition and activity of digestive enzymes L. Stumpf, C. Tropea and L.S. López Greco (Buenos Aires, Argentina)	404
Development of optimum feeding rate model for white sturgeon (<i>Acipenser transmontanus</i>) S. Lee, Y. Wang, S.S.O. Hung, A.B. Strathe, N.A. Fangue and J.G. Fadel (Davis, CA, USA)	411
Growth performance, lipid deposition and hepatic lipid metabolism related gene expression in juvenile turbot (<i>Scophthalmus maximus</i> L.) fed diets with various fish oil substitution levels by soybean oil M. Peng, W. Xu, K. Mai, H. Zhou, Y. Zhang, Z. Liufu, K. Zhang and Q. Ai (Qingdao, People's Republic of China)	442
The effects of fructooligosaccharide on the immune response, antioxidant capability and HSP70 and HSP90 expressions in blunt snout bream (<i>Megalobrama amblycephala</i> Yih) under high heat stress C.-N. Zhang, H.-Y. Tian, X.-F. Li, J. Zhu, D.-S. Cai, C. Xu, F. Wang, D.-D. Zhang and W.-B. Liu (Nanjing, People's Republic of China)	458
Hydroxyproline supplementation on the performances of high plant protein source based diets in turbot (<i>Scophthalmus maximus</i> L.) Y. Liu, G. He, Q. Wang, K. Mai, W. Xu and H. Zhou (PR China)	476
Quantitative methods to measure pigmentation variation in farmed Giant Tiger Prawns, <i>Penaeus monodon</i> , and the effects of different harvest methods on cooked colour N.M. Wade, C. Paulo, J. Goodall, M. Fischer, S. Poole and B.D. Glencross (Brisbane, QLD, Australia)	513

Physiology and Endocrinology: Fish

Effects of organic acids on growth performance and digestive enzyme activities of juvenile red drum <i>Sciaenops ocellatus</i> S. Castillo, M. Rosales, C. Pohlenz and D.M. Gatlin III (College Station, TX, USA)	6
Effect of cryopreservation on sperm motility parameters and fertilizing ability of brown trout semen J. Nynca, G.J. Dietrich (Olsztyn, Poland), S. Dobosz, J. Grudniewska (Zukowo, Poland) and A. Ciereszko (Olsztyn, Poland)	62
Effect of algae density on breathing and feeding of filter-feeding silver carp (<i>Hypophthalmichthys molitrix</i> Val.) Z. Zhao (Qingdao, Harbin, PR China), S. Dong, F. Wang, X. Tian and Q. Gao (Qingdao, PR China)	133
Assessment of growth and sea lice infection levels in Atlantic salmon stocked in small-scale cages with lumpfish A.K. Imsland (Bergen, Norway), P. Reynolds, G. Eliassen (Norway), T.A. Hangstad, A.V. Nytrø (Tromsø, Norway), A. Foss, E. Vikingstad (Bergen, Norway) and T.A. Elvegård (Stokmarknes, Norway)	137
Sperm DNA fragmentation in zebrafish (<i>Danio rerio</i>) and its impact on fertility and embryo viability – Implications for fisheries and aquaculture J. Gosálvez, C. López-Fernández, A. Hermoso (Madrid, Spain), J.L. Fernández (A Coruña, Spain) and M.E. Kjelland (Vicksburg, MS, USA)	173
The efficacy and effect of repeated exposure to 2-phenoxyethanol, clove oil and tricaine methanesulphonate as anaesthetic agents on juvenile Angelfish (<i>Pterophyllum scalare</i>) O. Mitjana, C. Bonastre (Zaragoza, Spain), D. Insua (Spain), M.V. Falceto, J. Esteban, A. Josa and E. Espinosa (Zaragoza, Spain)	491
Long-term feeding restriction in prepubertal male sea bass (<i>Dicentrarchus labrax</i> L.) increases the number of apoptotic cells in the testis and affects the onset of puberty and certain reproductive parameters S. Escobar, A. Felip, M. Salah, S. Zanuy and M. Carrillo (Castellón, Spain)	504

Physiology and Endocrinology: Molluscs and Crustaceans

Effects of polychaetes (<i>Perinereis nuntia</i>) on sperm performance of the domesticated black tiger shrimp (<i>Penaeus monodon</i>) R. Leelatanawit, U. Uawisetwathana (Klong Luang, Thailand), J. Khudet (Thailand), A. Klanchui (Klong Luang, Thailand), S. Phomklad, S. Wongtripop (Thailand), P. Angthoung (Bangkok, Thailand), P. Jiravanichpaisal and N. Karoonuthaisiri (Klong Luang, Thailand)	266
Spermatophore replacement of pink shrimp <i>Farfantepenaeus brasiliensis</i> after manual extrusion: Effect of molting A. Braga, D.L.A. Lopes, L.H. Poersch and W. Wasielesky (Rio Grande, Brazil)	313

Molecular identification of a new androgenic gland-specific insulin-like gene from the mud crab, <i>Scylla paramamosain</i> Y. Zhang, K. Qiao, S. Wang, H. Peng, Z. Shan and K. Wang (Xiamen, PR China)	325
Effects of bacterial biofilms on settlement of plantigrades of the mussel <i>Mytilus coruscus</i> Y.-F. Li, X.-P. Guo, J.-L. Yang, X. Liang (Shanghai, China), W.-Y. Bao (Yangzhou, China), P.-J. Shen, Z.-Y. Shi and J.-L. Li (Shanghai, China)	434
Production Science	
Feed digestibility and productive performance of bullfrogs raised in cages and fed in different periods and high frequency C.S. de Castro, D. Argentim, P.K. Novelli, J.M. Costa, C.S.M. de Menezes, A.C. Neto, J.C. de Souza Vieira, P. de Magalhães Padilha and C.A. Agostinho (Botucatu, Brasil)	1
Body composition in fishes: body size matters J.E. Breck (Ann Arbor, MI, USA)	40
Field scale evaluation of seaweed aquaculture as a nutrient bioextraction strategy in Long Island Sound and the Bronx River Estuary J.K. Kim (Stamford, CT, USA), G.P. Kraemer (Purchase, NY, USA) and C. Yarish (Stamford, CT, USA)	148
Validation of a bio-energetic model for juvenile salmonids using growth data from a production-scale feeding study R.P. Canale (MI, USA) and G. Whelan (Lansing, MI, USA)	201
Implications of physical key factors in the early rearing of the long-snouted seahorse <i>Hippocampus guttulatus</i> A. Blanco, A. Chamorro and M. Planas (Vigo, Spain)	214
Evaluation of the protein requirement of juvenile Chinese soft-shelled turtle (<i>Pelodiscus sinensis</i> , Wiegmann) fed with practical diets J. Wang (Hebei, Guangzhou, China), Z. Qi (Guangzhou, China) and Z. Yang (Hebei, China)	252
Artificial neural network modeling of the water quality in intensive <i>Litopenaeus vannamei</i> shrimp tanks Z. Ma (Dalian, Qingdao, People's Republic of China), X. Song, R. Wan (Qingdao, People's Republic of China), L. Gao and D. Jiang (Dalian, People's Republic of China)	307
Optimal dietary ration for juvenile pigfish, <i>Orthopristis chrysoptera</i> , grow-out E.W. Oberg, C.K. Faulk and L.A. Fuiman (Port Aransas, TX, USA)	335
Feasibility of polyculture of blue shrimp <i>Litopenaeus stylirostris</i> and goldlined rabbitfish <i>Siganus lineatus</i> in a mesocosm system T.C. Luong (Nouméa Cedex, New Caledonia; Nha Trang, Viet Nam), S. Hochard, F. Royer, H. Lemonnier and Y. Letourneur (Nouméa Cedex, New Caledonia)	340
Community composition of the intertidal in relation to the shellfish aquaculture industry in coastal British Columbia, Canada L.I. Bendell (Burnaby, BC, Canada)	384
Short-term cycles of feed deprivation and refeeding promote full compensatory growth in the Amazon fish matrinxã (<i>Brycon amazonicus</i>) E.C. Urbinati (São Paulo, Brazil), S.J. Sarmiento (Bogotá, Colombia) and L.S. Takahashi (São Paulo, Brazil)	430
The effect of triploidy on vaccine side-effects in Atlantic salmon T.W.K. Fraser (Oslo, Norway), T. Hansen (Matredal, Norway), I. Mayer (Oslo, Norway), J.E. Skjæraasen , K.A. Glover (Bergen, Norway), F. Sambraus and P.G. Fjelldal (Matredal, Norway)	481
Sustainability and Society	
Microbiological quality of whole and filleted shelf-tilapia P. Gatti Junior , A.W.A. Assunção , J.C. Baldin and L.A. Amaral (Sao Paulo, Brazil)	196
Certified standards and vertical coordination in aquaculture: The case of pangasius from Vietnam N. Trifković (København K, Denmark)	235
Influence of suspended mussel lines on sediment erosion and resuspension in Lagune de la Grande Entrée, Îles-de-la-Madeleine, Québec, Canada T.R. Walker, J. Grant (Halifax, NS, Canada), A.M. Weise (Mont Joli, QC, Canada), C.W. McKinsey (Mont Joli, Rimouski, QC, Canada), M.D. Callier (Mont Joli, Rimouski, QC, Canada; Palavas-les-Flots, France) and M. Richard (Mont Joli, Rimouski, QC, Canada; France)	450
Stochastic bio-economic optimization of pond size for intensive commercial production of whiteleg shrimp <i>Litopenaeus vannamei</i> M.A. Gonzalez-Romero (Tepic, Mexico), A. Hernandez-Llamas (La Paz, Mexico), J.M.J. Ruiz-Velazco, T.N. Plascencia-Cuevas (Tepic, Mexico) and J.T. Nieto-Navarro (Tepic, San Blas, Mexico)	496

Aquaculture Research

Volume 45, Number 10, September 2014

Contents

Original Articles

- 1581 Immunostimulatory effect of water soluble fraction of *Nyctanthes arbortristis* leaves on the immune response in *Oreochromis mossambicus* (Peters)
L D Devasree, C Bipuramesh and R D Michael
- 1591 Mass selection for small-sized cysts in *Artemia franciscana* produced in Vinh Chau salt ponds, Vietnam
N T H Van, N Van Hoa, P Bossier, P Sorgeloos and G Van Stappen
- 1600 Effects of shrimp pond water on phytoplankton: importance of salinity and trophic status of the receiving environment
A P Cardozo and C Odebrecht
- 1611 Effects of various dietary factors on astaxanthin absorption in Atlantic salmon (*Salmo salar*)
N Chimsung, C Tantikitti, J E Milley, V Verlhac-Trichet and S P Lall
- 1621 Digestible dietary protein and energy requirements of juvenile Asian horseshoe crabs, *Tachypleus tridentatus* and *Carcinoscorpius rotundicauda*
M Hu, Y Wang, S G Cheung and P K S Shin
- 1634 Changes in oil content, lipid class and fatty acid composition of the microalga *Chaetoceros calcitrans* over different phases of batch culture
M R Miller, S-Y Quek, K Staehler, T Nalder and M A Packer
- 1648 Nutrient removal efficiency of *Hydropuntia cornea* in an integrated closed recirculation system with pink shrimp *Farfantepenaeus brasiliensis*
D Robledo, L Navarro-Angulo, D Valdes Lozano and Y Freile-Pelegrín
- 1659 Dietary effects on egg production, egg-hatching rate and female life span of the tropical calanoid copepod *Acartia bilobata*
Y-J Pan, S Souissi, A Souissi, C-H Wu, S-H Cheng and J-S Hwang
- 1672 Effects of stocking density and feeding duration in cage-cum-pond-integrated system on growth performance, water quality and economic benefits of *Labeo victorianus* (Boulenger 1901) culture
A Mokoro, E Oyoo-Okoth, C C Ngugi, J Njiru, J Rasowo, V Chepkirui-Boit and D Manguya-Lusega
- 1685 Molecular physiology mechanism of cytochrome P450 aromatase-regulating gonad development in ovoviparous black rockfish (*Sebastodes schlegeli*)
H-S Wen, W-J Mu, Y-P Yang, D Shi, F He and J-F Li
- 1697 Bath efficacy of sodium hypochlorite, oxytetracycline dihydrate and chloramphenicol against bacterial black disease in fairy shrimp *Branchinella thailandensis*
C Saejung, K Hatai and L-o Sanoamuang
- 1706 The induction of Hsp70 synthesis by non-lethal heat shock confers thermotolerance and resistance to lethal ammonia stress in the common carp, *Cyprinus carpio* (Linn)
Y Y Sung, H J Liew, A M Ambok Bolong, M E Abdul Wahid and T H MacRae
- 1713 Biofloc technology in intensive broodstock farming of the pink shrimp *Farfantepenaeus duorarum*: spawning performance, biochemical composition and fatty acid profile of eggs
M Emerenciano, G Cuzon, M Arévalo and G Gaxiola
- 1727 Incubation rate and larvae size of Persian sturgeon (*Acipenser persicus* Borodin 1897) in relation to sperm restripping
H Dadras, H Khara and S Baradaran Noveiri

Short Communication

- 1733 Male germ cell proliferation and apoptosis during the reproductive cycle of captive-reared Atlantic bluefin tuna *Thunnus thynnus* (Linnaeus)
R Zupa, N Santamaría, C C Mylonas, M Deflorio, F de la Gádara, R Vassallo-Agius, C Pousis, L Passantino, G Centoducati, G Bello and A Corriero

The Journal is indexed by A S F A Aquaculture Abstracts (Online Edition) (Aquatic Sciences & Fisheries Abstracts), AgBiotech News and Information, Agricola, C R I S, Agricultural Engineering Abstracts, Agroforestry Abstracts (Online Edition), Animal Breeding Abstracts, Aquatic Sciences & Fisheries Abstracts, BIOBASE, Biological Abstracts, BIOSIS Previews, Biotechnology & Bioengineering Abstracts, C S A Animal Behavior Abstracts (Cambridge Scientific Abstracts), Current Awareness in Biological Sciences, Current Contents, Dairy Science Abstracts, Environment Abstracts, Environment Abstracts Annual, Environmental Issues & Policy Index, Environmental Science and Pollution Management, Forestry Abstracts, Genetics Abstracts, GEOBASE, Helminthological Abstracts, Horticultural Science Abstracts, Index Veterinaricus, Irrigation and Drainage Abstracts, Maize Abstracts Online, Microbiology Abstracts, Nutrition Abstracts and Reviews, Oceanic Abstracts, Ornamental Horticulture, Pig News & Information, Plant Breeding Abstracts, Postharvest News and Information, Potato Abstracts, Poultry Abstracts, Protozoological Abstracts, Review of Agricultural Entomology & Review of Medical and Veterinary Entomology, Review of Aromatic and Medicinal Plants, Review of Medical and Veterinary Mycology, Rice Abstracts, Rural Development Abstracts, Soils and Fertilizers, Soybean Abstracts (Online Edition), Sugar Industry Abstracts, Tropical Diseases Bulletin, Veterinary Bulletin, Wheat, Barley and Triticale Abstracts, Wildlife Review Abstracts, World Agricultural Economics and Rural Sociology Abstracts, Zoological Record

CANADIAN JOURNAL OF
Agricultural Economics

REVUE CANADIENNE
D'Agroéconomie

VOL. 62 NO. 3

SEPTEMBER

2014

ARTICLES

- Income Diversification of Rural Households in China  *Jianmei Zhao and Peter J. Barry* 307
- Dietary Globalization in Chinese Breakfasts  *Junfei Bai, Jill J. McCluskey, Hainan Wang and Shi Min* 325
- Seasonal and Spatial Variations in Demand for and Elasticities of Fish Products in the United States: An Analysis Based on Market-Level Scanner Data  *Kehar Singh, Madan M. Dey and Prasanna Surathkal* 343
- The Effects of Wind Turbines on Property Values in Ontario: Does Public Perception Match Empirical Evidence?  *Richard J. Vyn and Ryan M. McCullough* 365
- L'Évaluation économique de l'investissement dans la conservation des sols: Le cas des aménagements antiérosifs dans le bassin versant du lac Lagdo au Cameroun  *Dorothé Yong Ngondjeb, Bernadette Dia Kamgnia, Patrick Nje and Michel Havard* 393
- Does It Pay to Increase Competition in Combinatorial Conservation Auctions?  *M. S. Iftekhar, A. Hailu and R. K. Lindner* 411



Yoichiro Kanno, Benjamin H. Letcher, Jason C. Vokoun, and Elise F. Zipkin	1010–1019	Spatial variability in adult brook trout (<i>Salvelinus fontinalis</i>) survival within two intensively surveyed headwater stream networks
Chris J. Harvey	1020–1029	Mediation functions in Ecopath with Ecosim: handle with care
Jamilynn B. Poletto, Dennis E. Cocherell, Natalie Ho, Joseph J. Cech, Jr., A. Peter Klimley, and Nann A. Fangue	1030–1038	Juvenile green sturgeon (<i>Acipenser medirostris</i>) and white sturgeon (<i>Acipenser transmontanus</i>) behavior near water-diversion fish screens: experiments in a laboratory swimming flume
Kevin N. McDonnell and Brian M. Roth	1039–1049	Evaluating the effect of pelagic zooplankton community composition and density on larval walleye (<i>Sander vitreus</i>) growth with a bioenergetic-based foraging model
Janet L. Loxterman, Ernest R. Keeley, and Zacharia M. Njoroge	1050–1058	Evaluating the influence of stocking history and barriers to movement on the spatial extent of hybridization between westslope cutthroat trout and rainbow trout
Tracy Bowerman, Bethany T. Neilson, and Phaedra Budy	1059–1071	Effects of fine sediment, hyporheic flow, and spawning site characteristics on survival and development of bull trout embryos
Mark W. Rogers, David B. Bunnell, Charles P. Madenjian, and David M. Warner	1072–1086	Lake Michigan offshore ecosystem structure and food web changes from 1987 to 2008
Stefanie A. Kring, Stephanie E. Figary, Gregory L. Boyer, Susan B. Watson, and Michael R. Twiss	1087–1095	Rapid in situ measures of phytoplankton communities using the bbe FluoroProbe: evaluation of spectral calibration, instrument intercompatibility, and performance range
Chantelle M. Penney, Gordon W. Nash, and A. Kurt Gamperl	1096–1105	Cardiorespiratory responses of seawater-acclimated adult Arctic char (<i>Salvelinus alpinus</i>) and Atlantic salmon (<i>Salmo salar</i>) to an acute temperature increase
Arild Folkvord, Christian Jørgensen, Knut Korsbrekke, Richard D.M. Nash, Trygve Nilsen, and Jon Egil Skjæraasen	1106–1112	Trade-offs between growth and reproduction in wild Atlantic cod
Núria Caldúch-Verdiell, Brian R. MacKenzie, James W. Vaupel, and Ken H. Andersen	1113–1120	A life-history evaluation of the impact of maternal effects on recruitment and fisheries reference points
	CORRIGENDUM	RECTIFICATIF
Noel R. Swain, Morgan D. Hocking, Jennifer N. Harding, and John D. Reynolds	1121	Corrigendum: Effects of salmon on the diet and condition of stream-resident sculpins

Canadian Journal of Fisheries and Aquatic Sciences

Volume 71, Number 6, June 2014

Postage paid at Ottawa Port payé à Ottawa
Publications mail Poste-publication
Registration No. 40110225 Enregistrement n° 40110225
USPS periodical postage paid at Plattsburgh, NY 12901, USA

Journal canadien des sciences halieutiques et aquatiques

Volume 71, numéro 6, juin 2014

RAPID COMMUNICATION

François Poisson, John David Filmalter,
Anne-Lise Vernet, and Laurent Dagorn

795–798

COMMUNICATION RAPIDE

Mortality rate of silky sharks (*Carcharhinus falciformis*)
caught in the tropical tuna purse seine fishery in the
Indian Ocean

ARTICLES

799–807

ARTICLES

Variable effects of climate and density on the juvenile
ecology of two salmonids in an Alaskan lake

Ryan P. Kovach, John E. Joyce,
Scott C. Vulstek, Evan M. Barrientos,
and David A. Tallmon

808–813

Modeling shell disease in American lobster (*Homarus
americanus*) as individual-based health trajectories

Michael F. Thusty, Anita Kim,
and Kathleen M. Castro

814–823

Using model simulations to compare performance of
two commercial salmon management strategies in Bristol
Bay, Alaska

Justin M. Carney and Milo D. Adkison

824–830

Daytime avoidance of chemosensory alarm cues by adult
sea lamprey (*Petromyzon marinus*)

Richard T. Di Rocco, Cowan F. Belanger,
István Imre, Grant E. Brown,
and Nicholas S. Johnson

831–846

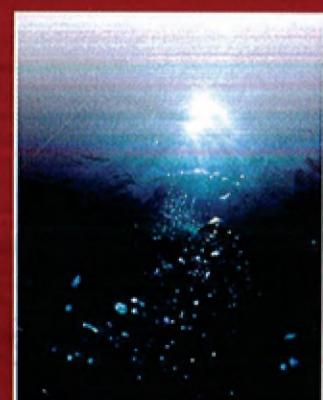
Marine survival difference between wild and hatchery-
reared steelhead trout determined during early
downstream migration

Michael C. Melnychuk, Josh Korman,
Stephen Hausch, David W. Welch,
Don J.F. McCubbing, and Carl J. Walters

Continued on inside back cover / Suite au verso

Front cover: Ihoko Saito/Toshiyuki Tajima/Dex Image/Getty Images.

Page couverture : Ihoko Saito/Toshiyuki Tajima/Dex Image/Getty Images.



Skyler R. Sagarese, Michael G. Frisk, Robert M. Cerrato, Kathy A. Sosebee, John A. Musick, and Paul J. Rago	847–877	Application of generalized additive models to examine ontogenetic and seasonal distributions of spiny dogfish (<i>Squalus acanthias</i>) in the Northeast (US) shelf large marine ecosystem
Jarod P. Lyon, Tomas Bird, Simon Nicol, Joanne Kearns, Justin O'Mahony, Charles R. Todd, Ian G. Cowx, and Corey J.A. Bradshaw	878–886	Efficiency of electrofishing in turbid lowland rivers: implications for measuring temporal change in fish populations
Roxane Tremblay, Reinhard Pienitz, and Pierre Legendre	887–914	Reconstructing phosphorus levels using models based on the modern diatom assemblages of 55 lakes in southern Quebec
Jared J. Homola, Carl R. Ruettz III, Steven L. Kohler, and Ryan A. Thum	915–926	Weak effects of a microsporidian parasite on mottled sculpin in Michigan streams
	PERSPECTIVES	PERSPECTIVES
Gary G. Mittelbach, Nicholas G. Ballew, and Melissa K. Kjelvik	927–944	Fish behavioral types and their ecological consequences
Matthew F. Johnson and Stephen P. Rice	945–957	Animal perception in gravel-bed rivers: scales of sensing and environmental controls on sensory information

Canadian Journal of Fisheries and Aquatic Sciences

Volume 71, Number 8, August 2014

Postage paid at Ottawa
Publications mail
Registration No. 40110225
Port payé à Ottawa
Poste-publication
Enregistrement n° 40110225
USPS periodical postage paid at Plattsburgh, NY 12901, USA

Journal canadien des sciences halieutiques et aquatiques

Volume 71, numéro 8, août 2014

ARTICLES

**Kevin A. Thompson, Selina S. Heppell,
and Grant G. Thompson**

1123–1133

ARTICLES

The effects of temperature and predator densities on the consumption of walleye pollock (*Gadus chalcogrammus*) by three groundfish in the Gulf of Alaska

**James E. Whitney, Keith B. Gido,
and David L. Propst**

1134–1145

Factors associated with the success of native and nonnative species in an unfragmented arid-land riverscape

**David L. Strayer, Kathryn A. Hattala,
Andrew W. Kahnle, and Robert D. Adams**

1146–1157

Has the Hudson River fish community recovered from the zebra mussel invasion along with its forage base?

**Nicholas Weber, Nicolaas Bouwes,
and Chris E. Jordan**

1158–1170

Estimation of salmonid habitat growth potential through measurements of invertebrate food abundance and temperature

**Ivan J. Dolinsek, Robert L. McLaughlin,
James W.A. Grant, Lisa M. O'Connor,
and Thomas C. Pratt**

1171–1185

Do natural history data predict the movement ecology of fishes in Lake Ontario streams?

**Marian Peña, M. Pilar Olivar, Rosa Balbín,
Jose Luis López-Jurado, Magdalena Iglesias,
and Joan Miquel**

1186–1197

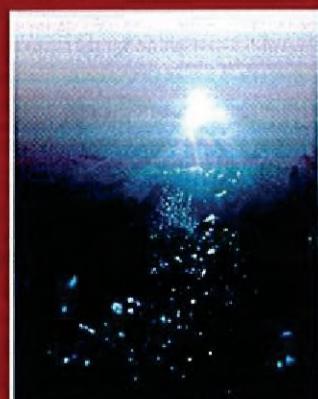
Acoustic detection of mesopelagic fishes in scattering layers of the Balearic Sea (western Mediterranean)

Douglas C. Braun and John D. Reynolds

1198–1208

Life history and environmental influences on population dynamics in sockeye salmon

Continued on inside back cover / Suite au verso



Front cover: Ihoko Saito/Toshiyuki Tajima/Dex Image/Getty Images.

Page couverture : Ihoko Saito/Toshiyuki Tajima/Dex Image/Getty Images.



Timothy D. Mussen, Oliver Patton, Dennis Cocherell, Ali Ercan, Hossein Bandeh, M. Levent Kavvas, Joseph J. Cech Jr., and Nann A. Fangue	1209–1219	Can behavioral fish-guidance devices protect juvenile Chinook salmon (<i>Oncorhynchus tshawytscha</i>) from entrainment into unscreened water-diversion pipes?
Mark S. Chambers, Leesa A. Sidhu, and Ben O'Neill	1220–1228	Southern bluefin tuna (<i>Thunnus maccoyii</i>) shed tags at a higher rate in tuna farms than in the open ocean — two-stage tag retention models
Paul B. Conn, Devin S. Johnson, Lowell W. Fritz, and Brian S. Fadely	1229–1242	Examining the utility of fishery and survey data to detect prey removal effects on Steller sea lions (<i>Eumetopias jubatus</i>)
Raquel Fernández-Cebrián, Rosa María Araguas, Nuria Sanz, and Jose Luis García-Marín	1243–1255	Genetic risks of supplementing trout populations with native stocks: a simulation case study from current Pyrenean populations
Andrew M. Muir, Michael T. Arts, Marten A. Koops, Timothy B. Johnson, Charles C. Krueger, and Trent M. Sutton	1256–1269	Reproductive life-history strategies in lake whitefish (<i>Coregonus clupeaformis</i>) from the Laurentian Great Lakes
Steven F. Railsback, Bret C. Harvey, and Jason L. White	1270–1278	Facultative anadromy in salmonids: linking habitat, individual life history decisions, and population-level consequences

CRUSTACEANA

Volume 87 - August 2014 - Parts 8-9

Contents

FINN A. VIEHBERG, RENATE MATZKE-KARASZ, LISA PARK BOUSH & ALISON J. SMITH, Fossil and Recent meet Kempf Database.....	897
RENATE MATZKE-KARASZ, Eugen Karl Kempf, the man behind the Kempf Database Ostracoda	901
ALEXANDRE MESTRE, JUAN S. MONRÓS & FRANCESC MESQUITA-JOANES, A review of the Entocytheridae (Ostracoda) of the world: updated bibliographic and species checklists and global georeferenced database, with insights into host specificity and latitudinal patterns of species richness	923
TADEUSZ NAMOTKO, DAN L. DANIELOPOL, CLAUDE MEISCH, MARTIN GROSS & NATAŠA MORI, Redefinition of the genus <i>Typhlocypris</i> Vejdovský, 1882 (Ostracoda, Candonidae).....	952
DAYOU ZHAI & WANHE ZHAO, On some Recent non-marine ostracods from northern China, with description of one new species	985
JIAN-QIANG YIN, QING-CHAO CHEN & KAI-ZHI LI, <i>Bathyconchoecia liui</i> n. sp., a new species of ostracod (Myodocopa, Halocyprididae) from the South China Sea	1027
MUNEF MOHAMMED & DIETMAR KEYSER, <i>Adencythere kodalnamerensis</i> , a new genus and a new species (Ostracoda) from Kod Al-Namer Beach, Aden City, Yemen	1036
CLAUDIA WROZYNA, WERNER E. PILLER & MARTIN GROSS, Morphotypes of <i>Cytheridella ilosvayi</i> (Ostracoda) detected by soft and hard part analyses	1043
RENATE MATZKE-KARASZ, CHRISTINA NAGLER & SIMON HOFMANN, The ostracod springtail — camera recordings of a previously undescribed high-speed escape jump in the genus <i>Tanycypris</i> (Ostracoda, Cypridoidea)	1072

(Continued on inside cover page)

Indexed/Abstracted in: *Abstracts of Mycology; AgBiotech News and Information; Animal Breeding Abstracts; Aquatic Sciences & Fisheries Abstracts (Part 1 & 2); Bibliography and Index of Geology; BIOBase; Biological Abstracts; BIOSIS Previews; CAB Abstracts; Current Awareness in Biological Sciences; Current Contents; Entomology Abstracts; Environmental Sciences & Pollution Management; Forest Products Abstracts; Forestry Abstracts; GEOBase; Helminthological Abstracts; Index to Scientific Reviews; Index Veterinarius; Irrigation & Drainage Abstracts; Nutrition Abstracts and Reviews; Oceanic Abstracts; Plant Genetic Resources Abstracts; Protozoological Abstracts; Referativnyi Zhurnal; Research Alert (Philadelphia); Review of Agricultural Entomology & Review of Medical and Veterinary Entomology; Review of Medical & Veterinary Mycology; Russian Academy of Sciences Bibliographies; Science Citation Index; SCOPUS; Social Work Research and Abstracts (now: Social Work Abstracts); Soils & Fertilizers; South Pacific Periodicals Index; Soyabean Abstracts; Speleological Abstracts; Sport Fisheries Abstracts (now: Fisheries Review); Veterinary Bulletin; Wildlife Review Abstracts; Zoological Record*

(Contents continued)

LAURENT DECROUY & TORSTEN W. VENNEMANN, Life histories and distribution of ostracods with depth in western Lake Geneva (Petit-Lac), Switzerland: a reconnaissance study	1095
BURKHARD SCHARF & FINN A. VIEHBERG, Living Ostracoda (Crustacea) from the town moat of Bremen, Germany	1124
BURKHARD SCHARF, ANJA ADLER & FINN A. VIEHBERG, New methods for collecting Ostracoda (Crustacea) in stony sediments with methodological remarks on the separation of ostracods from sediment	1136

© Copyright 2014 by Koninklijke Brill NV, Leiden, The Netherlands

Koninklijke Brill NV incorporates the imprints Brill, Brill Nijhoff, Global Oriental and Hotei Publishing. All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without written permission of the publisher.

Authorization to photocopy items for internal or personal use is granted by Brill provided that the appropriate fees are paid directly to Copyright Clearance Center, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, U.S.A. Fees are subject to change.

CRUSTACEANA

Volume 87 - September 2014 - Part 10

Contents

IRINA PRUSOVA & FAIZA AL-YAMANI, A new species of <i>Labidocera</i> (Copepoda, Calanoida, Pontellidae) from the Arabian Gulf.....	1149
MARCO ARCULEO, SABRINA LO BRUTTO, LEONARDO CANNIZZARO & SERGIO VITALE, Growth and reproduction of the deep-water rose shrimp, <i>Parapenaeus longirostris</i> (Lucas, 1846) (Decapoda, Penaeidae), in the Southern Tyrrhenian Sea	1168
ZHONGLI SHA & XIANQIU REN, A new species of the genus <i>Glyptelasma</i> Pilsbry (Cirripedia, Thoracica, Poecilasmatidae) from deep waters in the South China Sea	1185
J. JAMES, F. SLATER & J. CABLE, A.L.I.E.N. databases: addressing the lack in establishment of non-natives databases	1192
ALAN LEWIS, A comparison of the labrum-paragnath complex in five species of calanoid copepods ..	1200
HORST KURT SCHMINKE, Freshwater origin of Bathynellacea (Malacostraca)	1225
M. L. ARTÜZ, C. KUBANÇ & S. N. KUBANÇ, <i>Stereomastis artuzi</i> sp. nov., a new species of Polychelidae (Decapoda, Polychelida) described from the Sea of Marmara, Turkey	1243
GARY C. B. POORE, SHANE T. AHYONG, HEATHER D. BRACKEN-GRISOM, TIN-YAM CHAN, KA H. CHU, KEITH A. CRANDALL, PETER C. DWORSCHAK, DARRYL L. FELDER, RODNEY M. FELDMANN, MATÚŠ HYŽNÝ, HIROAKI KARASAWA, RAFAEL LEMAITRE, TOMOYUKI KOMAI, XINZHENG LI, FERNANDO L. MANTELATTO, JOEL W. MARTIN, NGUYEN NGOC-HO, RAFAEL ROBLES, CARRIE E. SCHWEITZER, AKIO TAMAKI, LING M. TSANG & CHRISTOPHER C. TUDGE, On stabilising the names of the infraorders of thalassinidean shrimps, Axiidea de Saint Laurent, 1979 and Gebiidea de Saint Laurent, 1979 (Decapoda).....	1258

(Continued on inside cover page)

Indexed/Abstracted in: Abstracts of Mycology; AgBiotech News and Information; Animal Breeding Abstracts; Aquatic Sciences & Fisheries Abstracts (Part 1 & 2); Bibliography and Index of Geology; BIOBase; Biological Abstracts; BIOSIS Previews; CAB Abstracts; Current Awareness in Biological Sciences; Current Contents; Entomology Abstracts; Environmental Sciences & Pollution Management; Forest Products Abstracts; Forestry Abstracts; GEOBase; Helminthological Abstracts; Index to Scientific Reviews; Index Veterinarius; Irrigation & Drainage Abstracts; Nutrition Abstracts and Reviews; Oceanic Abstracts; Plant Genetic Resources Abstracts; Protozoological Abstracts; Referativnyi Zhurnal; Research Alert (Philadelphia); Review of Agricultural Entomology & Review of Medical and Veterinary Entomology; Review of Medical & Veterinary Mycology; Russian Academy of Sciences Bibliographies; Science Citation Index; SCOPUS; Social Work Research and Abstracts (now: Social Work Abstracts); Soils & Fertilizers; South Pacific Periodicals Index; Soyabean Abstracts; Speleological Abstracts; Sport Fisheries Abstracts (now: Fisheries Review); Veterinary Bulletin; Wildlife Review Abstracts; Zoological Record

(Contents continued)

Notes and News	1273
PATRICIO DE LOS RÍOS-ESCALANTE & PATRICIO ACEVEDO, Crustaceans in four pristine North Patagonian Andean shallow ponds (Parque Tagua Tagua, 41°S, Chile)	1273
Review	1278
J. C. VON VAUPEL KLEIN, [Review of] M. Schmitt, 2013. From taxonomy to phylogenetics — life and work of Willi Hennig	1278

/

© Copyright 2014 by Koninklijke Brill NV, Leiden, The Netherlands

Koninklijke Brill NV incorporates the imprints Brill, Brill Nijhoff, Global Oriental and Hotei Publishing. All rights reserved. No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without written permission of the publisher.

Authorization to photocopy items for internal or personal use is granted by Brill provided that the appropriate fees are paid directly to Copyright Clearance Center, 222 Rosewood Drive, Suite 910, Danvers, MA 01923, U.S.A. Fees are subject to change.

Fish & Shellfish Immunology

Volume 40 • Issue 2 • October 2014

ISSN: 1050-4648

Journal is covered in Current Contents,
SciSearch, Research Alert, BIOSIS, Biobase and EMBiology
Science Citation Index and Focus on Veterinary Science & Medicine
Also covered in the abstract and citation database SCOPUS®.
Full text available on ScienceDirect®

Contents

Review Papers

- Nardocci, G., Navarro, C., Cortés, P. P., Imarai, M., Montoya, M., Valenzuela, B., Jara, P., Acuña-Castillo, C., Fernández, R. Neuroendocrine mechanisms for immune system regulation during stress in fish 531
Rombout, J. H. W. M., Yang, G., Kiron, V. Adaptive immune responses at mucosal surfaces of teleost fish 634

Regular Papers

- Bae, J.-S., Shim, S. H., Hwang, S. D., Park, M.-A., Jee, B.-Y., An, C.-M., Kim, Y.-O., Kim, J.-W., Park, C.-I. Expression analysis and biological activity of moronecidin from rock bream, *Oplegnathus fasciatus* 345
Gao, Y., Yi, Y., Wu, H., Wang, Q., Qu, J., Zhang, Y. Molecular cloning and characterization of secretory and membrane-bound IgM of turbot 354
Le Pabic, C., Goux, D., Guillamin, M., Safi, G., Lebel, J.-M., Koueta, N., Serpentini, A. Hemocyte morphology and phagocytic activity in the common cuttlefish (*Sepia officinalis*) 362
Sirimanapong, W., Thompson, K. D., Kledmanee, K., Thajongrak, P., Collet, B., Ooi, E. L., Adams, A. Optimisation and standardisation of functional immune assays for striped catfish (*Pangasianodon hypophthalmus*) to compare their immune response to live and heat killed *Aeromonas hydrophila* as models of infection and vaccination 374
Holen, E., Olsvik, P. A. Aryl hydrocarbon receptor protein and Cyp1A1 gene induction by LPS and phenanthrene in Atlantic cod (*Gadus morhua*) head kidney cells 384
Wang, J., Zou, L. L., Li, A. X. Construction of a *Streptococcus iniae* sortase A mutant and evaluation of its potential as an attenuated modified live vaccine in Nile tilapia (*Oreochromis niloticus*) 392
Kasthuri, S. R., Wan, Q., Whang, I., Lim, B.-S., Yeo, S.-Y., Choi, C. Y., Lee, J. Functional characterization of the evolutionarily preserved mitochondrial antiviral signaling protein (MAVS) from rock bream, *Oplegnathus fasciatus* 399

CONTENTS—Continued



1050-4648 (201410)40:2;1-D

This journal is printed on
acid free paper

Printed by Henry Ling Ltd,
The Dorset Press,
Dorchester, UK

Available online at www.sciencedirect.com

ScienceDirect

CONTENTS—Continued from Outside Back Cover

Vargas-Chacoff, L., Martínez, D., Oyarzún, R., Nualart, D., Olavarría, V., Yáñez, A., Bertrán, C., Ruiz-Jarabo, I., Mancera, J. M. Combined effects of high stocking density and <i>Piscirickettsia salmonis</i> treatment on the immune system, metabolism and osmoregulatory responses of the Sub-Antarctic Notothenioid fish <i>Eleginops maclovinus</i>	424
Chen, H., Yang, X., Tang, T., Li, J., Liu, B., Liu, F., Xie, S. The involvement of cysteine-rich intestinal protein in early development and innate immunity of Asiatic hard clam, <i>Meretrix meretrix</i>	435
Thanasaksiri, K., Sakai, N., Yamashita, H., Hirono, I., Kondo, H. Influence of temperature on Mx gene expression profiles and the protection of sevenband grouper, <i>Epinephelus septemfasciatus</i> , against red-spotted grouper nervous necrosis virus (RGNNV) infection after poly (I:C) injection	441
Hu, X., Hu, X., Hu, B., Wen, C., Xie, Y., Wu, D., Tao, Z., Li, A., Gao, Q. Molecular cloning and characterization of cathepsin L from freshwater mussel, <i>Cristaria plicata</i>	446
Li, J., Zhang, Y., Zhang, Y., Xiang, Z., Tong, Y., Qu, F., Yu, Z. Genomic characterization and expression analysis of five novel IL-17 genes in the Pacific oyster, <i>Crassostrea gigas</i>	455
Thitamadee, S., Srisala, J., Taengchaiyaphum, S., Sritunyalucksana, K. Double-dose β-glucan treatment in WSSV-challenged shrimp reduces viral replication but causes mortality possibly due to excessive ROS production	478
Martins, E., Figueras, A., Novoa, B., Santos, R. S., Moreira, R., Bettencourt, R. Comparative study of immune responses in the deep-sea hydrothermal vent mussel <i>Bathymodiolus azoricus</i> and the shallow-water mussel <i>Mytilus galloprovincialis</i> challenged with <i>Vibrio</i> bacteria	485
El-Asely, A. M., Abbass, A. A., Austin, B. Honey bee pollen improves growth, immunity and protection of Nile tilapia (<i>Oreochromis niloticus</i>) against infection with <i>Aeromonas hydrophila</i>	500
Xiang, Z., Qu, F., Wang, F., Li, J., Zhang, Y., Yu, Z. Characteristic and functional analysis of a ficolin-like protein from the oyster <i>Crassostrea hongkongensis</i>	514
Cheng, Z.-x., Ma, Y.-m., Li, H., Peng, X.-x. <i>N</i> -acetylglucosamine enhances survival ability of tilapias infected by <i>Streptococcus iniae</i>	524
Gradil, A. M., Wright, G. M., Speare, D. J., Wadowska, D. W., Purcell, S., Fast, M. D. The effects of temperature and body size on immunological development and responsiveness in juvenile shortnose sturgeon (<i>Acipenser brevirostrum</i>)	545
Bich Hang, B. T., Phuong, N. T., Kestemont, P. Can immunostimulants efficiently replace antibiotic in striped catfish (<i>Pangasianodon hypophthalmus</i>) against bacterial infection by <i>Edwardsiella ictaluri</i> ?	556
Kai, Y.-H., Wu, Y.-C., Chi, S.-C. Immune gene expressions in grouper larvae (<i>Epinephelus coioides</i>) induced by bath and oral vaccinations with inactivated betanodavirus	563
Guerreiro, I., Pérez-Jiménez, A., Costas, B., Oliva-Teles, A. Effect of temperature and short chain fructooligosaccharides supplementation on the hepatic oxidative status and immune response of turbot (<i>Scophthalmus maximus</i>)	570
Losada, A. P., Bermúdez, R., Faílde, L. D., Di Giancamillo, A., Domeneghini, C., Quiroga, M. I. Effects of <i>Enteromyxum scophthalmi</i> experimental infection on the neuroendocrine system of turbot, <i>Scophthalmus maximus</i> (L.)	577
Sun, Z., Jiang, Q., Wang, L., Zhou, Z., Wang, M., Yi, Q., Song, L. The comparative proteomics analysis revealed the modulation of inducible nitric oxide on the immune response of scallop <i>Chlamys farreri</i>	584
Liu, B., Xu, P., Xie, J., Ge, X., Xia, S., Song, C., Zhou, Q., Miao, L., Ren, M., Pan, L., Chen, R. Effects of emodin and vitamin E on the growth and crowding stress of Wuchang bream (<i>Megalobrama amblycephala</i>)	595
Xu, J., Ruan, L., Shi, H. eIF2 α of <i>Litopenaeus vannamei</i> involved in shrimp immune response to WSSV infection	609
Wu, N., LaPatra, S. E., Li, J., Sunyer, J. O., Zhang, Y.-A. Complement C5a acts as molecular adjuvant in fish by enhancing antibody response to soluble antigen	616
Ingerslev, H.-C., Strube, M. L., Jørgensen, L. G., Dalsgaard, I., Boye, M., Madsen, L. Diet type dictates the gut microbiota and the immune response against <i>Yersinia ruckeri</i> in rainbow trout (<i>Oncorhynchus mykiss</i>)	624
Kania, P. W., Chettri, J. K., Buchmann, K. Characterization of serum amyloid A (SAA) in rainbow trout using a new monoclonal antibody	648

Contents

| VOL. 34 NO.4 | FISHING CHIMES | JULY 2014 |

- 5 EDITORIAL: Sustainability
- 6 EVENT: WORLD OCEAN DAY : celebration at Chennai, T.N
- 8 EVENT: "AQUACULTURE CHENNAI" 2014 :
Theme : Sustainable Shrimp Farming- Way Forward
- 14 EVENT: Dr. C. Vasudevappa honoured
By Forum of Fisheries Technologists, Bengaluru (Bangalore, India)
- 16 Pisces *et alia*: A snapshot of Scampi Farming in Vietnam
Partha Bandyopadhyay
- 18 Policy efforts needed to strengthen the fisheries sector of India
*with particular reference to the newly formed States of Andhra Pradesh
and Telangana*
Y.G.K.Murthy
- 20 Stretched Shrimp: CIIT's shrimp-stretching mould for Value Addition
B. Madhusudana Rao, L.N.Murthy, D.Jesmi and M.M.Prasad
- 24 A Red Letter Day for Indian Aquaculture - *Sea cage farming of Cobia*
Johnson D' Cruz
- 28 Reminiscences of a Retired Fisheries Professional
A. Sreenivasan
- 29 Profile: DFYWA (District Fishermen's Youth Welfare Association)
- 31 Demonstration of Mussel Farming in Karnataka: A Success Story
*Geetha Sasikumar, G.Sampath Kumar, B.Shridhara, G.D. Nataraja,
Prathibha Rohit, K.S. Mohamed, P.K. Asokan and S.P. Karamathulla*
- 34 Fish Poisoning in Water bodies of NE India : A CASE STUDY
*S. K. S. Abujam, G. Paswan, S. Dakua, D. J. Deori, H. K. Phukon,
S. P. Biswas and A.K.Saikia*
- 39 Nisin - A boon on control of Aquafood spoilage
Agni Kumar, S., Saravanan, K., Ezhil Nilavan, S. and NaveenChandru, V
- 45 Ghost Fishing : *Impacts and Management*
*Gaihiamngam Kamei, M.P. Remesan, H.Mandakini Devi, N.C. Tok,
Khillak Gangmei & Samson Panmei*



- 47 Solar cooling and fish preservation- *Bright prospects for using renewable energy in fisheries* Sanath Kumar, Binaya Bhushan Nayak, Rajesh M, Manjusha L, Madonna T. Thachil

- 51 Determination of Age and Growth of Cyprinid Fish of Tropical Environment Using Scales - A Protocol
N.C.Ujjania, Nandita Soni and L.L.Sharma



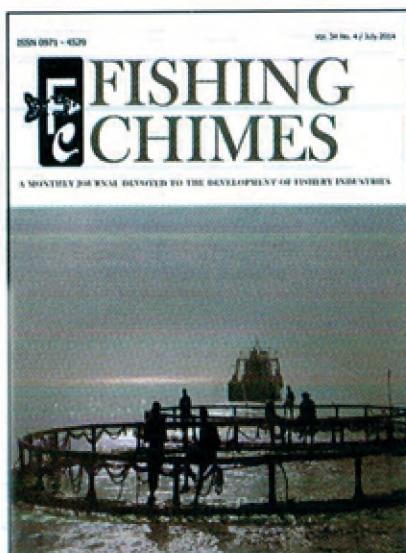
Fishing Chimes is registered as a Journal in India (No. 37750/81). **Chief Editor and Publisher:** J.V.H.Dixitulu; **Managing Editor:** Eashwar Dev Anand, **Printed by:** G.Ramakrishna, Raamakrishna Printers Pvt Ltd, 49 - 24-5, Sankaramattam Road, Madhuranagar, Visakhapatnam - 16, Ph: 2740222, 2798072, **Editorial Consultant:** V.V.Sugunan, **Associate Editor:** K.Vijayakumaran; **Advisory Board:** Michael New, M.V.Gupta, Mohan Joseph Modayil, S.D.Tripathi, Mohankumaran Nair, I.Karunasagar; **Resident Editors:** Orissa: H.S.Badapanda, Tamil Nadu: D.B.James, Kerala: D.D.Nambudiri; **Representatives:** Gujarat: Anuj Kumar Tiwari, Karnataka: H.N.Chandrasekhariah, Jharkhand: Ashish Kumar, Kerala : K.Sreekumar, Basheer Ahamed, Washington D.C: Santhi Jammi.

Contact Information~ Address: Fishing Chimes, Chimes House, Sector - 12, Plot - 176, M.V.P.Colony, Visakhapatnam - 530017, Andhra Pradesh, India; **Phone:** +91-891-2784271, 2784542; **Email:** info@fishingchimes.com; **Annual Subscription Charges:** Rs. 975/- for delivery by Ordinary Book-Post, Rs. 1275/- for Registered Book Post and Rs.1475/- for delivery via Courier. Overseas Subscription charges are USD 80 per year. **Email ids:** To subscribe : subscriptions@fishingchimes.com; **To advertise:** advertiser.support@fishingchimes.com; **For article submissions:** editor@fishingchimes.com

Fishing Chimes welcomes readers comments, suggestions on ways to improve the quality of the journal to cater to the stakeholders of the sector. Please send in your suggestions and queries to eashwar_anand@fishingchimes.com

**Disclaimer: The views and opinions expressed in the columns, Industry logs and business logs are that of the authors and do not necessarily reflect the views and opinions of Fishing Chimes. Fishing Chimes only provides a platform for expression of their views and to discuss about their businesses. Fishing Chimes is not associated with any of the companies or organisations. If any discrepancy in the contents is observed, please let us know via email to info@fishingchimes.com*

About the front cover



Cover Image: Cage culture farming

There are various efforts being undertaken to augment India's fishery output. While some efforts are concentrating on increasing the number of species being farmed, other efforts are being focussed on increasing the area available for culture. Sea cage farming with cobia, caters to both the arenas, with farming of new species and at the same time introducing previously untapped resources of the sea for farming.

Contents

| VOL. 34 NO.5 & 6 | FISHING CHIMES | AUGUST & SEPTEMBER 2014 |

EDITORIAL: Fisheries of Exclusive Economic Zone of India: Rational Utilisation	5	Artificial Reefs and its Importance in Marine Fisheries Management <i>Loveson Edward & Shubhadeep Ghosh</i>	26
Expert Committee from Andhra Pradesh studies Punjab Fish Culture	6	Report of the Expert Committee constituted for comprehensive review of the deep sea fishing policy and guidelines - A CRITIQUE <i>P.P.Pillai</i>	29
Event: Fish Farmers' Day 2014 - Celebration and a day's training programme on "Recent Advances in Aquaculture"	10	Event: CIBA Training on "Health Management Practices for Finfish and Shellfish of Brackishwater Environment"	35
"Running Mortality Syndrome"- Progressive mortalities in Shrimp farming ponds. <i>A.Ravi Kumar and K.R.S. Sambasiva Rao</i>	13On the Dol net fishery from different centres of Maharashtra <i>Sushant Mane and Sujit Sundaram</i>	37
KVK, Murshidabad Develops Low Cost Raikhor Bata (<i>C. reba</i>) Breeding Technique <i>S. Patra¹, A. Roy, S. Giri, U. Roy, U. Mandal</i>	16	Current Scenario of Fisheries Development in Rajasthan <i>L.L.Sharma and R.M.Srivastava</i>	41
Current Status of Capture Fisheries in Meghalaya, the North - Eastern State of India <i>Rupak Nath and Umesh. C. Goswami</i>	19	'Control' Population in Selective Breeding Programmes of Aquaculture Species <i>PK Meher, MKhuntia, L Sahoo, P Das, P. Mishra, JK Sundaray & P. Jayasankar</i>	46

ICES Journal of Marine Science

Journal du Conseil

Volume 71 Number 6 September 2014

<http://icesjms.oxfordjournals.org/>

Contents

1311 Introduction

F. W. Köster, R. L. Stephenson, & E. A. Trippel

Gadoid fisheries: the ecology and management of rebuilding

1317 Original Articles

H. Höffle, P. Solemdal, K. Korsbrekke, M. Johannessen, K. Bakkeplass, & O. S. Kjesbu

Variability of northeast Arctic cod (*Gadus morhua*) distribution on the main spawning grounds in relation to biophysical factors

1332 *M. O. Hammill, G. B. Stenson, D. P. Swain, & H. P. Benoît*

Feeding by grey seals on endangered stocks of Atlantic cod and white hake

1342 *X. Cormon, C. Loots, S. Vaz, Y. Vermand, & P. Marchal*

Spatial interactions between saithe (*Pollachius virens*) and hake (*Merluccius merluccius*) in the North Sea

1356 *D. R. Zemeckis, W. S. Hoffman, M. J. Dean, M. P. Armstrong, & S. X. Cadrin*

Spawning site fidelity by Atlantic cod (*Gadus morhua*) in the Gulf of Maine: implications for population structure and rebuilding

1366 *L. A. Kerr, S. X. Cadrin, & A. I. Kovach*

Consequences of a mismatch between biological and management units on our perception of Atlantic cod off New England

1382 *V. Neumann, F. W. Köster, M. Schaber, & M. Eero*

Recovery in eastern Baltic cod: is increased recruitment caused by decreased predation on early life stages?

1393 *P. J. Wright*

Are there useful life history indicators of stock recovery rate in gadoids?

1407 *M. J. Morgan, P. A. Shelton, & R. M. Rideout*

An evaluation of fishing mortality reference points under varying levels of population productivity in three Atlantic cod (*Gadus morhua*) stocks

1417 *K. Michalsen, T. Johansen, S. Subbey, & A. Beck*

Linking tagging technology and molecular genetics to gain insight in the spatial dynamics of two stocks of cod in Northeast Atlantic waters

1433 *S. J. Holmes, C. P. Millar, R. J. Fryer, & P. J. Wright*

Gadoid dynamics: differing perceptions when contrasting stock vs. population trends and its implications to management

1443 *J. Cao, S. B. Truesdell, & Y. Chen*

Impacts of seasonal stock mixing on the assessment of Atlantic cod in the Gulf of Maine

- 1458** *M. Eero, J. Hemmer-Hansen, & K. Hüsse*
Implications of stock recovery for a neighbouring management unit: experience from the Baltic cod
- 1467** *J. A. Hutchings & A. Kuparinen*
Ghosts of fisheries-induced depletions: do they haunt us still?
- 1474** *M. J. Dean, W. S. Hoffman, D. R. Zemeckis, & M. P. Armstrong*
Fine-scale diel and gender-based patterns in behaviour of Atlantic cod (*Gadus morhua*) on a spawning ground in the Western Gulf of Maine
- 1490** *D. R. Zemeckis, D. Martins, L. A. Kerr, & S. X. Cadrin*
Stock identification of Atlantic cod (*Gadus morhua*) in US waters: an interdisciplinary approach
- 1507** *A. Kuparinen, D. M. Keith, & J. A. Hutchings*
Increased environmentally driven recruitment variability decreases resilience to fishing and increases uncertainty of recovery

ICES Journal of Marine Science

Journal du Conseil

Volume 71 Number 7 September/October 2014

<http://icesjms.oxfordjournals.org/>

Contents

Regular Articles

1515 Review

A. Grüss, J. Robinson, S. S. Heppell, S. A. Heppell, & B. X. Semmens

Conservation and fisheries effects of spawning aggregation marine protected areas: What we know, where we should go, and what we need to get there

1535 Quo Vadimus

S. Kidd & D. Shaw

The social and political realities of marine spatial planning: some land-based reflections

1542 Original Articles

M. H. Pinkerton & J. M. Bradford-Grieve

Characterizing foodweb structure to identify potential ecosystem effects of fishing in the Ross Sea, Antarctica

1554 *T. Rouyer, J-M. Fromentin, M. Hidalgo, & N. C. Stenseth*

Combined effects of exploitation and temperature on fish stocks in the Northeast Atlantic

1563 *F. Maynou*

Coviability analysis of Western Mediterranean fisheries under MSY scenarios for 2020

1572 *S. Shephard, A. Rindorf, M. Dickey-Collas, N. T. Hintzen, K. Farnsworth, & D. G. Reid*

Assessing the state of pelagic fish communities within an ecosystem approach and the European Marine Strategy Framework Directive

1586 *H. Bornatowski, A. F. Navia, R. R. Braga, V. Abilhoa, & M. F. M. Corrêa*

Ecological importance of sharks and rays in a structural foodweb analysis in southern Brazil

1593 *A. Barausse, V. Correale, A. Curkovic, L. Finotto, E. Riginella, E. Visentin, & C. Mazzoldi*

The role of fisheries and the environment in driving the decline of elasmobranchs in the northern Adriatic Sea

1604 *W-P. Tsai, C-L. Sun, A. E. Punt, & K-M. Liu*

Demographic analysis of the shortfin mako shark, *Isurus oxyrinchus*, in the Northwest Pacific using a two-sex stage-based matrix model

1619 *F. Valenzuela-Quiñonez, J. C. Garza, J. A. De-Anda-Montañez, & F. J. García-de-León*

Inferring past demographic changes in a critically endangered marine fish after fishery collapse

1629 *J. E. Powers*

Age-specific natural mortality rates in stock assessments: size-based vs. density-dependent

1638 *S. L. Simons, H. Bartelings, K. G. Hamon, A. J. Kempf, R. Döring, & A. Temming*

Integrating stochastic age-structured population dynamics into complex fisheries economic models for management evaluations: the North Sea saithe fishery as a case study

- 1653** *F. Massiot-Granier, E. Prévost, G. Chaput, T. Potter, G. Smith, J. White, S. Mäntyniemi, & E. Rivot*
Embedding stock assessment within an integrated hierarchical Bayesian life cycle modelling framework: an application to Atlantic salmon in the Northeast Atlantic
- 1671** *D. P. Kilduff, L. W. Botsford, & S. L. H. Teo*
Spatial and temporal covariability in early ocean survival of Chinook salmon (*Oncorhynchus tshawytscha*) along the west coast of North America
- 1683** *D. W. Cooper, J. T. Duffy-Anderson, B. L. Norcross, B. A. Holladay, & P. J. Stabeno*
Nursery areas of juvenile northern rock sole (*Lepidopsetta polyxystra*) in the eastern Bering Sea in relation to hydrography and thermal regimes
- 1696** *P. A. Matis, W. F. Figueira, I. M. Suthers, J. Humphries, A. Miskiewicz, R. A. Coleman, B. P. Kelaher, & M. D. Taylor*
Cyclonic entrainment? The ichthyoplankton attributes of three major water mass types generated by the separation of the East Australian Current
- 1706** *S. Pacariz, G. Björk, & H. Svedäng*
Interannual variability in the transport of fish eggs in the Kattegat and Öresund
- 1717** *A. J. Phillips, L. Ciannelli, R. D. Brodeur, W. G. Pearcy, & J. Childers*
Spatio-temporal associations of albacore CPUEs in the Northeastern Pacific with regional SST and climate environmental variables
- 1728** *D. M. Kaplan, E. Chassot, J. M. Amandé, S. Dueri, H. Demarcq, L. Dagorn, & A. Fonteneau*
Spatial management of Indian Ocean tropical tuna fisheries: potential and perspectives
- 1750** *R. B. Cabral, P. M. Aliño, & M. T. Lim*
Modelling the impacts of fish aggregating devices (FADs) and fish enhancing devices (FEDs) and their implications for managing small-scale fishery
- 1760** *M. Cabanellas-Reboreda, J. Alós, D. March, M. Palmer, G. Jordà, & M. Palmer*
Where and when will they go fishing? Understanding fishing site and time choice in a recreational squid fishery
- 1774** *D. W. Fuller & K. M. Schaefer*
Evaluation of a fishing captain's ability to predict species composition, sizes, and quantities of tunas associated with drifting fish-aggregating devices in the eastern Pacific Ocean
- 1781** *M. Léopold, N. Guillemot, D. Rocklin, & C. Chen*
A framework for mapping small-scale coastal fisheries using fishers' knowledge
- 1793** *J. A. Kolling & A. O. Ávila-da-Silva*
Evaluation of determinants of *Xiphopenaeus kroyeri* (Heller, 1862) catch abundance along a Southwest Atlantic subtropical shelf
- 1805** *G. Respondek, J. Gröger, J. Floeter, & A. Temming*
Variability of fishing effort for the German brown shrimp (*Crangon crangon*) fishing fleet: influencing factors, and seasonal and spatial patterns
- 1818** *M. F. O'Neill, G. M. Leigh, Y-G. Wang, J. M. Braccini, & M. C. Ives*
Linking spatial stock dynamics and economics: evaluation of indicators and fishery management for the travelling eastern king prawn (*Melicertus plebejus*)
- 1835** *A. M. Scheld & C. M. Anderson*
Market effects of catch share management: the case of New England multispecies groundfish
- 1846** *J. Hentati-Sundberg, J. Hjelm, & H. Österblom*
Does fisheries management incentivize non-compliance? Estimated misreporting in the Swedish Baltic Sea pelagic fishery based on commercial fishing effort
- 1854** *T. J. Emery, K. Hartmann, B. S. Green, C. Gardner, & J. Tisdell*
Fishing for revenue: how leasing quota can be hazardous to your health

- 1866** *D. W. dela Cruz, R. D. Villanueva, & M. V. B. Baria*
Community-based, low-tech method of restoring a lost thicket of *Acropora* corals
- 1876** *F. T. Chan, E. Briski, S. A. Bailey, & H. J. MacIsaac*
Richness–abundance relationships for zooplankton in ballast water: temperate versus Arctic comparisons
- 1885** *S. M. Budge, E. Devred, M-H. Forget, V. Stuart, M. K. Trzcinski, S. Sathyendranath, & T. Platt*
Estimating concentrations of essential omega-3 fatty acids in the ocean: supply and demand
- 1894** *T. N. Forland, H. Hobæk, E. Ona, & R. J. Korneliussen*
Broad bandwidth acoustic backscattering from sandeel—measurements and finite element simulations
- 1904** *T. N. Forland, H. Hobæk, & R. J. Korneliussen*
Scattering properties of Atlantic mackerel over a wide frequency range
- 1913** *R. N. Harris, C. M. Harris, C. D. Duck, & I. L. Boyd*
The effectiveness of a seal scarer at a wild salmon net fishery
- 1921** **Comment**
L. Garibaldi, J. Gee, S. Tsuji, P. Mannini, & D. Currie
Comment on: “Managing fisheries from space: Google Earth improves estimates of distant fish catches” by Al-Abdulrazzak and Pauly
- 1927** **Reply**
D. Al-Abdulrazzak & D. Pauly
Ground-truthing the ground-truth: reply to Garibaldi *et al.*’s comment on “Managing fisheries from space: Google Earth improves estimates of distant fish catches”
- Marine Harvesting in the Arctic**
- 1932** **Introduction**
T. Haug, M. Aschan, A. H. Hoel, T. Johansen, & J. H. Sundet
Introduction: marine harvesting in the Arctic
- 1934** **Original Articles**
M. M. McBride, P. Dalpadado, K. F. Drinkwater, O. R. Godø, A. J. Hobday, A. B. Hollowed, T. Kristiansen, E. J. Murphy, P. H. Ressler, S. Subbey, E. E. Hofmann, & H. Loeng
Krill, climate, and contrasting future scenarios for Arctic and Antarctic fisheries
- 1956** *M. Falardeau, D. Robert, & L. Fortier*
Could the planktonic stages of polar cod and Pacific sand lance compete for food in the warming Beaufort Sea?
- 1966** *K. Windsland, C. Hvingel, E. M. Nilssen, & J. H. Sundet*
Dispersal of the introduced red king crab (*Paralithodes camtschaticus*) in Norwegian waters: a tag-recapture study
- 1977** *G. B. Stenson & M. O. Hammill*
Can ice breeding seals adapt to habitat loss in a time of climate change?
- 1987** **Erratum**
M. Conor McManus, C. A. Oviatt, A. E. Giblin, J. Tucker, & J. T. Turner
The Western Maine Coastal Current reduces primary production rates, zooplankton abundance and benthic nutrient fluxes in Massachusetts Bay

Published by Oxford University Press for
International Council for the Exploration of the Sea
Conseil International pour l’Exploration de la Mer
H. C. Andersens Boulevard 44-46, DK-1553 Copenhagen V, Denmark

Anatomy:

- Moult-related changes in the integument, midgut, and digestive gland in the freshwater amphipod *Gammarus pulex*
MÉLISSA TREVISAN, DELPHINE LEROY, NICOLE DECLOUX, JEAN-PIERRE THOMÉ, AND PHILIPPE COMPÈRE .. 539

Aquaculture and Fisheries:

- Evaluation of optimum dietary protein level for juvenile whiteleg shrimp (*Litopenaeus vannamei*)
ERFAN SHAHKAR, HYEONHO YUN, GUNHYUN PARK, IN-KWON JANG, SU KYOUNG KIM, KUMAR KATYA,
AND SUNGCHUL C. BAI 552

Behavior:

- Behavioral decisions in sensory landscapes: crayfish use chemical signals to make habitat use choices
ANA M. JURCAK AND PAUL A. MOORE 559
- Characteristics, distribution patterns, and implications for ichnology of modern burrows of *Uca (Leptuca) speciosa*, San
Salvador Island, Bahamas
FRANCISCO J. RODRÍGUEZ-TOVAR, KOJI SEIKE, AND H. ALLEN CURRAN 565

Ecology:

- Occurrence and effects of the rhizocephalan parasite *Diplothylacus sinensis* (Cirripedia: Rhizocephala: Thomsoniidae) in
the swimming crab *Portunus sanguinolentus* (Decapoda: Portunidae) in Honghai Bay, South China Sea
CHANG-PING YANG, HENG-XIANG LI, LU LI, AND YAN YAN 573
- Morphometry and relative growth of populations of *Tanais dulongii* (Audoin, 1826) (Tanaidacea: Tanaidae) in pristine
and impacted marine environments of the Southwestern Atlantic
CARLOS E. RUMBOLD, SANDRA M. OBENAT, AND EDUARDO D. SPIVAK 581
- Breeding and heterosexual pairing in the snapping shrimp *Alpheus estuariensis* (Caridea: Alpheidae) in a tropical bay in
northeastern Brazil
ANA CARLA COSTA-SOUZA, SERGIO SCHWARZ DA ROCHA, LUIS ERNESTO ARRUDA BEZERRA, AND
ALEXANDRE OLIVEIRA ALMEIDA 593
- Microhabitat use of early benthic stage mud crabs, *Scylla serrata* (Forskål, 1775), in eastern Australia
HILKE ALBERTS-HUBATSCH, SHING YIP LEE, KAREN DIELE, MATTHIAS WOLFF, AND INGA NORDHAUS 604

Larvae and Development:

- Post-larval developmental dynamics of the Spinicaudatan (Branchiopoda: Diplostraca) carapace
BRYAN P. BROWN, TIMOTHY I. ASTROP, AND STEPHEN C. WEEKS 611
- Sternal spines in penaeid postlarvae (Decapoda: Penaeidae): life-phase-specific and systematically significant?
JAMES G. DITTY 618

Physiology:

- Measurement of tissue lipid reserves in the American lobster (*Homarus americanus*): hemolymph metabolites as
potential biomarkers of nutritional status
MICHAEL A. CIARAMELLA, ANDREA L. BATTISON, AND BARBARA HORNEY 629
- Effect of food shortage on growth, energetic reserves mobilization, and water quality in juveniles of the redclaw crayfish,
Cherax quadricarinatus, reared in groups
LIANE STUMPF, FERNANDO CASTILLO DÍAZ, VERÓNICA ELIZABETH VIAU, WAGNER C. VALENTI, AND
LAURA SUSANA LÓPEZ GRECO 639

Population Biology and Genomics:

- Genetic lineage and environmental conditions as drivers of chromosome variation in the anchialine shrimp
Halocaridina rubra Holthuis, 1963 (Caridea: Atyidae)
REBECCA C. VAUGHT, JUSTIN C. HAVIRD, AND SCOTT R. SANTOS 647
- Genetic assessment of parentage in the caridean rock shrimp *Rhynchocinetes typus* based on microsatellite markers
DEBORAH A. BAILIE, SÉAN FITZPATRICK, MELISSA CONNOLLY, MARTIN THIEL, ROSALEEN HYNES, AND
PAULO A. PRODÖHL 658

Taxonomy:

- The rise and fall of *Pyrgopsella youngi* – rediscovery of a lost species
YAIR ACHITUV AND NOA SIMON-BLECHER 663

(contents continued on inside back cover)

Short Communication:

- Fiddler on the roof: a northern range extension for the marsh fiddler crab *Uca pugnax* 671
DAVID SAMUEL JOHNSON

Corrigendum:

- Corrigendum to: Abundance and distribution of scyllarid phyllosoma larvae (Decapoda: Scyllaridae) in the Balearic Sea (Western Mediterranean) (DOI:10.1163/1937240X-00002250) 674
SANDRA MALLOL, ÁNGEL MATEO-RAMÍREZ, FRANCISCO ALEMANY, DIEGO ÁLVAREZ-BERASTEGUI,
DAVID DÍAZ, JOSÉ LUIS LÓPEZ-JURADO, AND RAQUEL GOÑI.....
-

REGULAR PAPERS

<i>Lee, M.-Y., Munroe, T. A. and Shao, K.-T.</i> , Description of a new cryptic, shallow-water tonguefish (Pleuronectiformes: Cynoglossidae: <i>Syphurus</i>) from the western North Pacific Ocean	563
<i>Davidsen, J. G., Daverdin, M., Arnekleiv, J. V., Rønning, L., Sjursen, A. D. and Koksvik, J. I.</i> , Riverine and near coastal migration performance of hatchery brown trout <i>Salmo trutta</i>	586
<i>Holley, E. D., Ludwig, K. J., McEwen, D. C. and Wisenden, B. D.</i> , Predictability of food supply, but not ration, increases exploratory behaviour in zebrafish <i>Danio rerio</i>	597
<i>Birba, A., Ramallo, M. R., Morandini, L., Villafaña, V., Tubert, C., Guimarães Moreira, R. and Pandolfi, M.</i> , The pineal complex in the cichlid <i>Cichlasoma dimerus</i> : effect of different photoperiods on its cell morphology	605
<i>Spares, A. D., Dadswell, M. J., MacMillan, J., Madden, R., O'Dor, R. K. and Stokesbury, M. J. W.</i> , To fast or feed: an alternative life history for anadromous brook trout <i>Salvelinus fontinalis</i> overwintering within a harbour	621
<i>Persson, L. and Alanärä, A.</i> , The effect of shelter on welfare of juvenile Atlantic salmon <i>Salmo salar</i> reared under a feed restriction regimen	645
<i>Mitchell, J. D., Collins, K. J., Miller, P. I. and Suberg, L. A.</i> , Quantifying the impact of environmental variables upon catch per unit effort of the blue shark <i>Prionace glauca</i> in the western English Channel	657
<i>Lemos, V. M., Varela Jr., A. S., Schwingel, P. R., Muelbert, J. H. and Vieira, J. P.</i> , Migration and reproductive biology of <i>Mugil liza</i> (Teleostei: Mugilidae) in south Brazil	671
<i>Frazier, B. S., Driggers III, W. B., Adams, D. H., Jones, C. M. and Loefer, J. K.</i> , Validated age, growth and maturity of the bonnethead <i>Sphyrna tiburo</i> in the western North Atlantic Ocean	688
<i>Knickle, D. C. and Rose, G. A.</i> , Examination of fine-scale spatial-temporal overlap and segregation between two closely related congeners <i>Gadus morhua</i> and <i>Gadus ogac</i> in coastal Newfoundland	713
<i>Korwin-Kossakowski, M.</i> , Physical changes in specimens of five species of Cyprinidae preserved in ethanol and frozen	736
<i>Christian, J. M. and Adams, G. L.</i> , Effects of pool isolation on trophic ecology of fishes in a highland stream	752
<i>Biswas, S., Jahir Hussain, K., Das, N. P. I., Russell, B. C., Satpathy, K. K. and Mishra, S. S.</i> , Imprint of monsoonal patterns on the fish assemblage in coastal waters of south-east India: a case study	773
<i>Modica, L., Cartes, J. E. and Carrassón, M.</i> , Food consumption of five deep-sea fishes in the Balearic Basin (western Mediterranean Sea): are there daily feeding rhythms in fishes living below 1000 m?	800
<i>Byrkjedal, I., Hadler-Jacobsen, S., Rees, D. and Orlov, A.</i> , Molecular and morphological variation in saddled fathead sculpins (Psychrolutidae: <i>Cottunculus</i>) of the north-east Atlantic Ocean, with a synonymy of three species	821
<i>Yanase, K., Herbert, N. A. and Montgomery, J. C.</i> , Unilateral ablation of trunk superficial neuromasts increases directional instability during steady swimming in the yellowtail kingfish <i>Seriola lalandi</i>	838

Continued on inside back cover

Journal of Fish Biology is indexed in Animal Behaviour Abstracts; AQUAREF; Aquatic Science and Fisheries Abstracts; Biological Abstracts (BIOSIS); Chemical Abstracts; Current Contents/Fisheries; ISI Alerting Services; and Science Citation Index - Expanded.

This journal is available online. Visit wileyonlinelibrary.com to search the articles and register for table of contents e-mail alerts.

Continued from outside back cover

Patrick, P. and Strydom, N. A., Larval fish variability in response to oceanographic features in a nearshore nursery area	857
Preston, A. C., Taylor, J. F., Adams, C. E. and Migaud, H., Surface feeding and aggressive behaviour of diploid and triploid brown trout <i>Salmo trutta</i> during allopatric pair-wise matchings	882
Taylor, B. M., Rhodes, K. L., Marshall, A. and McIlwain, J. L., Age-based demographic and reproductive assessment of orangespine <i>Naso lituratus</i> and bluespine <i>Naso unicornis</i> unicornfishes	901
Irschick, D. J. and Hammerschlag, N., A new metric for measuring condition in large predatory sharks	917

BRIEF COMMUNICATIONS

Vieira, R. P. and Cunha, M. R., In situ observation of chimaerid species in the Gorringe Bank: new distribution records for the north-east Atlantic Ocean	927
Bondarenko, O., Dzyuba, B., Cosson, J., Rodina, M. and Linhart, O., Calcium ion supplementation increases brook trout <i>Salvelinus fontinalis</i> spermatozoa activation at the end of the spawning season	933
Gonçalves, C. G. B., Medeiros, C., Abraçado, L. G. and Acosta-Avalos, D., Magnetic material in the ocellar spot and lateral line of tomtates <i>Haemulon aurolineatum</i>	938
Beckmann, C. L., Mitchell, J. G., Seuront, L., Stone, D.A.J. and Huveneers, C., From egg to hatchling: preferential retention of fatty acid biomarkers in young-of-the-year Port Jackson sharks <i>Heterodontus portusjacksoni</i>	944
Faria, A. M., Borges, R. and Gonçalves, E. J., Critical swimming speeds of wild-caught sand-smelt <i>Atherina presbyter</i> larvae	953
Schedina, I. M., Pfautsch, S., Hartmann, S., Dolgener, N., Polgar, A., Bianco, P. G., Tiedemann, R. and Ketmaier, V., Isolation and characterization of eight microsatellite loci in the brook lamprey <i>Lampetra planeri</i> (Petromyzontiformes) using 454 sequence data	960
Henrich, T., Hafer, N. and Mobley, K. B., Effects of VIE tagging and partial tissue sampling on the immune response of three-spined stickleback <i>Gasterosteus aculeatus</i>	965
Li, Y., Wang, J., Zhao, K., Xie, B. and Peng, Z., Isolation and characterization of 16 polymorphic microsatellite loci for <i>Euchiloglanis kishinouyei</i>	972
Melià, P., Crivelli, A. J., Durif, C., Poole, R. and Bevacqua, D., A simplified method to estimate body growth parameters of the European eel <i>Anguilla anguilla</i>	978
Book Review	985

Journal of Fish Diseases

Volume 37, Number 10, October 2014

Contents

Biography

- 859 Biography *A E Pinkney, P C Baumann and J C Wolf*

Original Articles

- 863 Temporal and spatial patterns in tumour prevalence in brown bullhead *Ameiurus nebulosus* (Lesueur) in the tidal Potomac River watershed (USA)
A E Pinkney, J C Harshbarger and M A Rutter
- 877 Deltamethrin resistance in the sea louse *Caligus rogercresseyi* (Boxhall and Bravo) in Chile: bioassay results and usage data for antiparasitic agents with references to Norwegian conditions
K O Helgesen, S Bravo, S Sevatdal, J Mendoza and T E Horsberg
- 891 Recovery of *Hafnia alvei* from diseased brown trout, *Salmo trutta* L., and healthy noble crayfish, *Astacus astacus* (L.), in Bulgaria
P Orozova, I Sirakov, V Chikova, R Popova, A H Al-Harbi, M Crumlish and B Austin
- 899 Food deprivation causes rapid changes in the abundance and glucidic composition of the cutaneous mucous cells of Atlantic salmon *Salmo salar* L.
A Landeira-Dabarcá, M Álvarez and P Molist
- 911 Effect of multiple infections with white spot syndrome virus and *Vibrio anguillarum* on Pacific white shrimp *Litopenaeus vannamei* (L.): mortality and viral replication
I K Jang, G Qiao and S-K Kim

Short Communications

- 921 Introduced parasite *Anguillicola crassus* infection significantly impedes swim bladder function in the European eel *Anguilla anguilla* (L.)
J Barry, J McLeish, J A Dodd, J F Turnbull, P Boylan and C E Adams
- 925 Gill worm *Ancyrocephalus percae* (Ergens 1966) outbreak negatively impacts the Eurasian perch *Perca fluviatilis* L. stock of Lake Constance, Germany
J Behrmann-Godel, S Roch and A Brinker
- 931 A proposed liver needle core biopsy technique for the sharptooth catfish *Clarias gariepinus* (Burchell) for use in fish health research
M M Tresise, M L L Mokae, G M Wagenaar and J C Van Dyk
- 935 Clinical cardiomyopathy syndrome in Atlantic salmon, *Salmo salar* L.
H D Rodger, S J McCleary and N M Ruane

Covered in EMBASE, BIOBASE/CABS (Current Awareness in Biological Sciences), Current Contents/Fisheries, Marine Freshwater Biology, Veterinary Sciences, Science Citation Index, ISI Alerting Services, Medline, Aquatic Science & Fisheries Abstracts

Molluscan Research

International Journal of the Malacological Society of Australasia
and the Society for the Study of Molluscan Diversity
Volume 34, Number 3 (August 2014)

CONTENTS

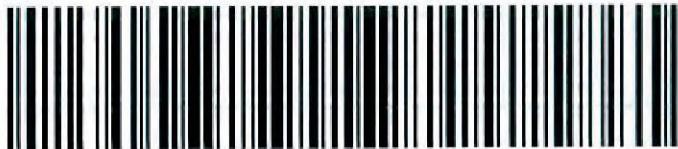
Articles

- The biology of *Placostylus ambagiosus* (Pulmonata: Bulimulidae) in New Zealand:
Part 1. Behaviour, habitat use, abundance, site fidelity, homing and the dimensions
of eggs and snails
G. Richard Parrish, Ian A.N. Stringer and Greg H. Sherley 139
- The biology of *Placostylus ambagiosus* (Pulmonata: Bulimulidae) in New Zealand:
Part 2. Population changes, growth, mortality and life expectancy
Ian A. N. Stringer, G. Richard Parrish, Greg H. Sherley and Darryl I. Mackenzie 155
- The prevalence of noroviruses in bivalve molluscs sold in Granada (Spain)
fish markets
*Elena Moreno, Elena Espigares, Marta Marañón, Lourdes M^a Ochoa, Miguel Espigares
and Milagros Fernández-Crehuet* 176
- New Zealand Recent Hyriidae (Mollusca: Bivalvia: Unionida)
Bruce A. Marshall, Mark C. Fenwick and Peter A. Ritchie 181
- Description of a new species of giant clam (Bivalvia: Tridacnidae)
from Ningaloo Reef, Western Australia
Shane S. Penny and Richard C. Willan 201

NORTH AMERICAN JOURNAL OF FISHERIES MANAGEMENT

VOLUME 34, NUMBER 4, August 2014

- 693 Use of Mini-Fyke Nets for Sampling Shallow-Water Fish Communities in Florida Lakes
K. I. Bonvechio, R. E. Sawyers, R. Bitz, and S. Crawford
- 702 [Management Brief] A Semi-Automated Method for Monitoring Dam Passage of Upstream Migrant Yellow-Phase American Eels
Stuart A. Welsh and Joni L. Aldinger
- 710 Managing a Marine Stock Portfolio: Stock Identification, Structure, and Management of 25 Fishery Species along the Atlantic Coast of the United States
Richard S. McBride
- 735 [Management Brief] Effects of Age at Treatment on Oxytetracycline Mark Formation in Larval Northern Pike
Jason C. Rhoten, Shannon J. Fisher, Dale E. Logsdon, and Bruce J. Pittman
- 741 Assessment of Subyearling Chinook Salmon Survival through the Federal Hydropower Projects in the Main-Stem Columbia River
John R. Skalski, M. Brad Eppard, Gene R. Ploskey, Mark A. Weiland, Thomas J. Carlson, and Richard L. Townsend
- 753 Comparative Swimming Performance of Five *Catostomus* Species and Roundtail Chub
Zachary E. Underwood, Christopher A. Myrick, and Robert I. Compton
- 764 An Egg-Per-Recruit Model to Evaluate the Effects of Upstream Transport and Downstream Passage Mortality of American Eel in the Susquehanna River
John A. Sweka, Sheila Eyler, and Michael J. Millard
- 774 [Management Brief] Otolith Daily Increment Deposition in Age-0 Smallmouth Bass Reared in Constant and Fluctuating Water Temperatures
Angela A. Hill and Kevin R. Bestgen
- 780 Multidecadal Evidence of Recovery of Nearshore Red Drum Stocks off West-Central Florida and Connectivity with Inshore Nurseries
Brent L. Winner, Kerry E. Flaherty-Walia, Theodore S. Switzer, and Julie L. Vecchio
- 795 [Management Brief] Long-Term Population Response of Triploid Grass Carp Stocked in Piedmont and Coastal Plain Reservoirs to Control Hydrilla
James P. Kirk, Kenneth L. Manuel, and Scott D. Lamprecht
- 802 Assessment of Fat Reserves Adequacy in the First Migrant Silver American Eels of a Large-Scale Stocking Experiment
Catherine M. Couillard, Guy Verreault, Pierre Dumont, David Stanley, and Ron W. Threader
- 814 Effects of Seawalls and Piers on Fish Assemblages and Juvenile Salmon Feeding Behavior
Stuart H. Munsch, Jeffery R. Cordell, Jason D. Toft, and Erin E. Morgan
- 828 Characterization of River Herring Bycatch in the Northwest Atlantic Midwater Trawl Fisheries
N. David Bethoney, Kevin D. E. Stokesbury, Bradley P. Schondelmeier, William S. Hoffman, and Michael P. Armstrong
- 839 Use of an Ecosystem-Based Model to Evaluate Alternative Conservation Strategies for Juvenile Chinook Salmon in a Headwater Stream
D. R. Warren, C. J. Harvey, M. M. McClure, and B. L. Sanderson
- 853 Genetic Diversity and Population Structure of Spring Chinook Salmon from the Upper Willamette River, Oregon
Marc A. Johnson and Thomas A. Friesen
- 863 Physiological Stress Responses to Prolonged Exposure to MS-222 and Surgical Implantation in Juvenile Chinook Salmon
Katie A. Wagner, Christa M. Woodley, Adam G. Seaburg, John R. Skalski, and M. Brad Eppard



New Additions to Library

Periodicals

1. Aqua International Vol. 22 (4) Aug '14
2. Aqua International Vol. 22 (5) Sep '14
3. Aquaculture : Vol. 432 , Aug '14
4. Aquaculture : Vol. 433 (SEP) '14
5. Aquaculture Research : Vol. 45 (10) Sep '14
6. Biospectrum : Vol. 9 (9) Sep '14 (Asia)
7. Canadian Journal of Agricultural Economics : Vol. 62 (3) Sep '14
8. Canadian Journal of Fisheries and Aquatic Sciences : Vol. 71 (6) Jun '14
9. Canadian Journal of Fisheries and Aquatic Sciences : Vol. 71 (7) Jul '14
10. Course Manual: Summer School on Technological Advancements in the Seed Production of Marine Finfish and Shellfish
11. Crustaceana : Vol. 87 (10) Sep '14
12. Crustaceana : Vol. 87 (8-9) Aug '14
13. Current Science : Vol. 107 (6) Sep '14
14. Down To Earth : Vol. 23 (9) Sep '14
15. Economic and Political Weekly : Vol. 49 (37) Sep '14
16. Economic and Political Weekly : Vol. 49 (38) Sep '14
17. Economic and Political Weekly : Vol. 49 (39) Sep '14
18. FAN - FAO Aquaculture Newsletter : No. 52, Jun '14
19. Fish and Shellfish Immunology : Vol. 40 (2) Oct '14
20. Fish and Shellfish Immunology : Vol. . 41 (1) Nov '14
21. Fish Farming International : Iss. 9, SEP '14
22. Fishing Chimes :Vol. 34 (4) Jul'14
23. Fishing News International : Vol. 53 (10) Oct '14
24. ICES Journal of Marine Science : Vol. 71 (6) Sep '14
25. ICES Journal of Marine Science : Vol. 71 (7) Sep / Oct '14
26. Indian Farming : Vol. 64 (4) Jul '14
27. Indian Farming : Vol. 64 (5) Aug '14
28. Indian Journal of Animal Sciences : Vol. 84 (9) Sep '14

29. Indian Journal of Experimental Biology : Vol. 52 (10) Oct '14
30. Journal of Bombay Natural History Society : Vol. 110 (3) Dec '13
31. Journal of Crustacean Biology : Vol.34 (5) Sep '14
32. Journal of Fish Biology : Vol. 85 (3) Sep '14
33. Journal of Fish Diseases : Vol 37 (10) Oct '14
34. Journal of Genetics : Vol. 93 (2) Aug '14
35. Journal of World Aquaculture Society : Vol. . 45 (4) Aug '14
36. Mausam : Vol. 63 (2) APR'12
37. MPEDA Newsletter Vol.2 (5) Aug '14
38. National Seminar on Reef Ecosystem Remediation: 24-26 September 2003 Suganthi Devadason Marine Research Institute, Tuticorin
39. Nature : No.7516) Sep '14
40. Nature : No.7517) Sep '14
41. Nature : Vol. 513 (7518) Sep '14
42. Nature : Vol. 513 (7519) Sep '14
43. Protected Area Update Vol. 20 (4) Aug '14
44. SAMUDRA Report No. 68, Aug '14
45. Sedme Vol. 41 (1) Mar '14
46. Statistical Science : Vol 29 (2) May '14
47. Training Manual: TSP-HRD Sponsored Training Programme Cage Culture of Marine Finfish and Shellfishes in Open Sea March 24-25, 2014
48. Training Manual: TSP-HRD Sponsored Training Programme Cage Culture of Marine Finfish and Shellfishes in Open Sea March 24-25, 2014

