

Sea Lice 2010 Program

Monday - May 10, 2010		* Denotes Presenting Author
9:00 am to 9:40 am	Opening Ceremonies Chair: Myron Roth, BC Ministry of Agriculture and Lands Welcome to the Territory Larry Pederson, Deputy Minister, BC Ministry of Agriculture and Lands	
9:40 am to 10:30 am	Plenary Presentation 1: Sea lice biology and emerging issues. Geoff A Boxshall, Department of Zoology, The Natural History Museum, UK Chair: Myron Roth, BC Ministry of Agriculture and Lands	
10:30 am to 11:00 am	Break – Refreshments provided in the Terrace Room	
11:00 am to 12:30 pm	Session 1 Global Perspectives Chair: Peter Andreas Heuch, National Veterinary Institute, Norway <ol style="list-style-type: none"> 1. Sea lice on wild juvenile Pacific salmon and farmed Atlantic salmon in the northern most salmon farming region in British Columbia. S Saksida*, L Greba, D Morrison, C Revie 2. Sea lice infections in Australian mariculture – a review. B F Nowak*, C J Hayward, N J Bott, L Gonzalez, R J G Lester 3. Exploratory space-time analyses of a large dataset on sea lice abundance on farmed salmon in Norway. P A Jansen*, H Viljugrein, A B Kristoffersen, P A Heuch 4. Size variation in <i>Lepeophtheirus salmonis</i> (Krøyer) ectoparasitic on wild salmon (<i>Salmo salar</i> L.) and sea trout (<i>Salmo trutta</i> L.) in Scottish waters. C D Todd*, A M Walker 5. Effectiveness of medicines used in the control of <i>Caligus rogercresseyi</i> in Chile. S Bravo 	
12:30 pm to 1:30 pm	Lunch – Provided in the Terrace Room	
1:30 pm to 3:10 pm	Session 2 Epidemiology and Management I Chair: Clare Backman, Marine Harvest Canada <ol style="list-style-type: none"> 1. Modelling <i>L. salmonis</i> sea lice populations on farms in the Hardangerfjord. G Gettinby*, C Robbins, F Lees, P A Heuch, B Finstad, C W Revie 2. Variability of planktonic salmon lice during the wild smolt migration period in the Hardangerfjord, Norway. L Asplin*, P A Bjørn, K K Boxaspen, I A Johnsen, A D Sandvik 3. Simulated and observed distribution of larval sea lice (<i>Lepeophtheirus salmonis</i> Kroyer, 1837) in Loch Torridon. A G Murray*, T L Amundrud, M J Penston, C C Pert, S J Middlemas 4. Using sentinel cages to monitor infection pressure from sea lice on salmonids in a Scottish west coast sea loch. C C Pert*, R Kilburn, P Cook, K Urquhart, S McBeath, S Weir, A McBeath, I Matejutsova, I R Bricknell 5. The diversity of <i>Lepeophtheirus</i> spp. on three-spine stickleback (<i>Gasterosteus aculeatus</i> L.) and juvenile Pacific salmon in coastal British Columbia. S R M Jones*, G Prosperi-Porta, E Kim 6. Louse infection of Pacific sockeye in coastal British Columbia. M H H Price*, S Proboszcz, C Orr 	
3:10 pm to 3:35 pm	Break - Refreshments provided in the Terrace Room	

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3:35 pm to 5:25 pm	<p>Session 3 Epidemiology and Management II Chair: Craig Orr, Watershed Watch Salmon Society, Canada</p> <ol style="list-style-type: none"> 1. An evaluation of the impact of early infestation with the salmon louse <i>Lepeophtheirus salmonis</i> on the subsequent survival of outwardly migrating Atlantic salmon smolts. D Jackson*, D Cotter, N O'Maoileidigh, P O'Donohoe, J White, F Kane, S Kelly, T Mc Dermott, A Cullen, S McEvoy, A Drumm, G Rogan 2. Assessing deltamethrin field efficacy in populations of sea lice (<i>Lepeophtheirus salmonis</i>) in New Brunswick, Canada. B L Giffin, J D Westcott, C W Revie, K L Hammell* 3. A Coupled Biophysical Sea Lice Model for the Broughton Archipelago. D J Stucchi*, M G G Foreman, M Guo, P Czajko 4. Sea lice and salmon population dynamics in response to management changes in the Broughton Archipelago. M Krkosek*, S Peacock 5. AlphaMax[®] and Salmosan[®]: Sea Lice Environmental Control Trials in New Brunswick. M J Beattie*, K E Brewer-Dalton 6. Hydrogen Peroxide treatments – significant efficacy improvements achieved utilizing modern wellboat technology. E Bugge*, I Armstrong 7. Optimizing sea lice treatment in large cages (circumference of 157 meters). N O Steine*, F Fridell, S Alexansersen, B Martinsen
6:00 pm	No Host Bar Open Terrace Room
7:00 pm to 10:00 pm	<p>Dinner provided in the Terrace Room</p> <p>Dinner Presentation: From Galileo to Geisha. Brian Harvey, Fugu Fisheries</p> <p>Introduction: Jeff Marliave, Vancouver Public Aquarium</p> <p>Sea Lice Logo Framed Print Auction</p>

Tuesday - May 11, 2010	
* Denotes Presenting Author	
9:00 am to 9:30 am	Day 2 Introduction and Student Awards Chair: Simon Jones, Fisheries and Oceans Canada
9:30 am to 10:15 am	Plenary Presentation 2: Evolution of sea lice in salmon farms. Robert Poulin, University of Otago, New Zealand Chair: Martin Krkosek, University of Washington
10:15 am to 10:45 am	Break – Refreshments provided in the Terrace Room
10:45 am to 12:00 pm	Session 4 Posters with Authors Present
12:00 pm to 1:00 pm	Lunch - Provided in Terrace Room

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1:00 pm to 3:05 pm	<p>Session 5 Resistance Chair: Larry Hammell, Atlantic Veterinary College, Centre for Aquatic Health Sciences, University of Prince Edward Island</p> <p>Plenary Presentation 3: Sea lice treatments: Effects, side effects and resistance development. Tor E Horsberg, Norwegian School of Veterinary Science, Norway</p> <ol style="list-style-type: none"> 1. Evidence of sea lice <i>Lepeophtheirus salmonis</i> tolerance to Emamectin Benzoate in New Brunswick Canada. J D Westcott*, C W Revie, B L Giffin, K L Hammell 2. Establishing baseline drug efficacy estimates for sea lice populations using bioassays: The case of <i>Lepeophtheirus salmonis</i> susceptibility to deltamethrin in New Brunswick, Canada. J D Westcott, C W Revie*, B Giffin, K L Hammell 3. Reduced sensitivity to emamectin benzoate in a farm population of sea lice (<i>Lepeophtheirus salmonis</i>) demonstrated by <i>in vivo</i> and <i>in vitro</i> testing of efficacy of Slice. A S Tildesley*, J G McHenry, W J Roy, R G Endris 4. Increased tolerance towards emamectin benzoate versus fitness in lab-reared sea louse (<i>Lepeophtheirus salmonis</i> Krøyer). P G Espedal*, K Glover, F Nilsen 5. Cloning of one MDR (Multidrug resistance) P-glycoprotein and four Multidrug-resistance associated proteins (MRPs) from the salmon louse (<i>Lepeophtheirus salmonis</i>). J Heumann, J E Bron, A Sturm*
3:05 pm to 3:30 pm	Break – Refreshments provided in the Terrace Room
3:30 pm to 5:30 pm	<p>Session 6 Genetics Chair: Barbara F Nowak, NCMCRS, University of Tasmania, Australia</p> <ol style="list-style-type: none"> 1. The influence of wild hosts on sea lice chemical resistance: can wild salmon conservation function as a resistance management tool? J D Ashander*, M A Lewis 2. Knockdown of the nuclear receptor LsRXR1 in salmon louse (<i>Lepeophtheirus salmonis</i>, Krøyer, 1837). C Eichner*, K Malde, S Dalvin, R Skern-Mauritzen, F Nilsen 3. LsCP1 – a putative development and hemostatic protein in the <i>Lepeophtheirus salmonis</i> (Krøyer 1837). R Skern-Mauritzen*, S Dalvin, C Eichner, P Frost, F Nilsen 4. Adaptive mucosal immunity effector molecules in Atlantic salmon, and their transcriptional changes during early <i>Lepeophtheirus salmonis</i> infection (copepod chalimus transition). T M Tadiso*, F Nilsen, I Hordvik 5. Reproduction and yolk proteins in salmon louse (<i>Lepeophtheirus salmonis</i>, Krøyer, 1837). S Dalvin*, R Skern-Mauritzen, C Eichner, P Frost, F Nilsen 6. Changes in sensitivity of <i>Caligus rogercresseyi</i> (Boxshall & Bravo 2000) to emamectin benzoate through time in southern Chile. S L Marín*, N Vera, J Martínez, S Vasquez 7. Reducing the impact of sea lice on fish health and welfare through selective breeding. K Gharbi*, G Watson, J E Bron, L Matthews, R J Roberts, M J Stear

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5:30 pm - 6:30 pm	Reception – Refreshments and light food provided in the Terrace Room
6:30 pm – 8:20 pm	<p>Session 7 Physiology and Functional Biology Chair: Chris D Todd, Scottish Oceans Institute, University of St Andrews, Scotland</p> <ol style="list-style-type: none"> 1. Ionoregulatory development of juvenile pink salmon (<i>Oncorhynchus gorbuscha</i>) plays a key role in sea louse (<i>Lepeophtheirus salmonis</i>) tolerance. M Sackville*, L Nendick, S Tang, A P Farrell, C J Brauner 2. Vertical distribution patterns of juvenile pink salmon, <i>Oncorhynchus gorbuscha</i> (Walbaum) with and without exposure to sea lice, <i>Lepeophtheirus salmonis</i> (Krøyer). S Tang*, A G Lewis, C DiBacco, M Sackville, L Nendick, C J Brauner, A P Farrell 3. Sea lice infections of wild fishes near ranched Southern Bluefin tuna (<i>Thunnus maccoyii</i>) in South Australia. C J Hayward*, I Svane, S K Lachimpadi, N Itoh, N J Bott, B F Nowak 4. Efficacy of in-feed immunostimulants and natural extracts against sea lice (<i>Lepeophtheirus salmonis</i>). L B Jensen*, Alex Obach 5. Altered immuno-physiology of Atlantic sturgeon (<i>Acipenser oxyrinchus</i>) under parasitic copepod (<i>Dichelesthium oblongum</i>) infection. M Fast*, M Sokolowski, B Allem 6. Differential P-glycoprotein gene (SL-Pgp1) expression in farmed and wild sea lice, <i>Lepeophtheirus salmonis</i>. O O Igboeli*, F C Guo, J F Burka 7. Differences in immune gene expression due to adult <i>Lepeophtheirus salmonis</i> infection in Atlantic (<i>Salmo salar</i>), chum (<i>Oncorhynchus keta</i>) and pink (<i>O. gorbuscha</i>) salmon. L M Braden*, S R M Jones, B Koop, D Barker

Wednesday – May 12, 2010	
* Denotes Presenting Author	
8:30 am to 8:45 am	Day 3 Introduction and Announcements Chair: Myron Roth, BC Ministry of Agriculture and Lands
8:45 am to 10:00 am	<p>Session 8 Wild/Farmed Interactions Chair: Karin K Boxaspen, Institute of Marine Research, Norway</p> <p>Plenary Presentation 4: Sorting through the factors that affect the abundance of Pacific salmon in British Columbia and in the North Pacific. Richard J Beamish, Fisheries and Oceans Canada</p> <ol style="list-style-type: none"> 1. Evidence of sea louse trophic transmission in coastal British Columbia. B M Connors*, N B Hargreaves, S R M Jones, L M Dill 2. Swimming performance of juvenile pink salmon (<i>Oncorhynchus gorbuscha</i>) with and without attached sea lice (<i>Lepeophtheirus salmonis</i>). L Nendick*, S Tang, M Sackville, A P Farrell, C J Brauner
10:00 am to 10:30 am	Break – Refreshments provided in the Terrace Room
10:30 am to 11:15 am	<p>Session 8 Wild/Farmed Interactions continued</p> <ol style="list-style-type: none"> 3. Planktonic densities of <i>Lepeophtheirus salmonis</i> before and after removal/relocation of an Atlantic salmon farm. M J Penston*, C P Millar 4. Susceptibility for salmon lice infections in Atlantic salmon postsmolts experiencing a suboptimal water quality. B Finstad*, F Kroglund, P A Bjørn,

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	R Nilsen, K Pettersen, B O Rosseland, H C Teien, T O Nilsen, S O Stefansson, B Salbu, P Fiske, L O E Ebbesson 5. Is the aquaculture production in the Hardangerfjord system beyond sustainable frames? P A Bjørn*, B Finstad, Ø Skaala, S Kålas, P A Heuch, L Asplin, K Boxaspen, R Nilsen, B Barlaup
11:15 am to 12:00 pm	Closing Remarks: Myron Roth, BC Ministry of Agriculture and Lands
	- SEA LICE 2010 CONCLUDED -
	MODELLING WORKSHOP – For Registered Workshop Participants Only
12:00 pm to 1:30 pm	Lunch - Provided in the Marino Room
1:30 pm to 5:00 pm	Modelling Workshop, Marino Room
1:30 pm-5:30 pm	LOCAL TOURS – Pick-up and drop-off at front of the hotel Tour 1 - World Renowned Butchart Gardens Tour 2 - Jack Brooks Salmon Hatchery & Tugwell Creek Honey Farm & Meadery Tour 3 - Pacific Coast Whale Watching
Thursday – May 13, 2010	
9:00 am to 5:00 pm	Modelling Workshop, Marino Room