Proceedings of the Eighth Meeting of the Canadian Eel Science Working Group: 30 August 2010, Ottawa ON

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2011

Canadian Technical Report of Fisheries and Aquatic Sciences No. 2919

Fisheries and Oceans Canada | Pêches et Océans Canada

Canada

Canadian Technical Report of Fisheries and Aquatic Sciences

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Les numéros 1 à 456 de cette série ont été publiés à titre de Rapports techniques de l'Office des recherches sur les pêcheries du Canada. Les numéros 457 à 714 sont parus à titre de Rapports techniques de la Direction générale de la recherche et du développement, Service des pêches et de la mer, ministère de l'Environnement. Les numéros 715 à 924 ont été publiés à titre de Rapports techniques du Service des pêches et de la mer, ministère des Pêches et de l'Environnement. Le nom actuel de la série a été établi lors de la parution du numéro 925.

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Editors

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Cat. No. Fs 97-6/2919E ISSN 1488-5379

Correct citation for this publication:

DFO. 2011. Eighth meeting of the Canadian Eel Science Working Group, 30 August 2010, Ottawa, ON. Can. Tech. Rep. Fish. Aquat. Sci. 2919: iii + 16 p.

ABSTRACT

DFO. 2011. Eighth meeting of the Canadian Eel Science Working Group, 30 August 2010, Ottawa, ON. Can. Tech. Rep. Fish. Aquat. Sci. 2919: iii + 16 p.

The Canadian Eel Science Working Group (CESWoG) met for the eighth time on August 30 at 200 Kent St. in Ottawa, Ontario. The purpose of the meeting was to review the terms of reference for CESWoG and to review American Eel (*Anguilla* rostrata) data relevant to new and emerging issues in eel science. The meeting participants included representatives from: Fisheries and Oceans Canada (DFO) Science, DFO Fisheries Management, Parks Canada, Provinces of Quebec and Ontario, Aboriginal groups, academics, students, Ontario Power Generation, and the eel industry. A list of participants is given in Appendix 3.

RÉSUMÉ

MPO. 2011. Eighth meeting of the Canadian Eel Science Working Group, 30 August 2010, Ottawa, ON. Can. Tech. Rep. Fish. Aquat. Sci. 2919: iii + 16 p.

La huitième réunion du Groupe de travail scientifique canadien sur l’anguille (GTSCA) a eu lieu le 30 août au 200, rue Kent, à Ottawa (Ontario). Cette réunion avait pour but d’examiner le mandat du GTSCA ainsi que les données sur l’anguille (*Anguilla rostrata*) qui sont utiles dans le contexte des nouveaux enjeux liés à la recherche scientifique sur l’anguille. Sciences et Gestion des pêches du ministère des Pêches et des Océans (MPO), Parcs Canada, les provinces de Québec et de l’Ontario, des groupes autochtones, des membres du milieu universitaire, des étudiants, Ontario Power Generation et l’industrie de l’anguille ont participé à cette réunion. La liste des participants figure à l’annexe 3.

CESWOG PROCEEDINGS

DISCUSSION ON TERMS OF REFERENCE

The 8th CESWoG meeting began with a discussion on the Terms of Reference for CESWoG. The main concern was whether CESWoG was the correct forum for providing scientific advice to DFO fisheries managers. DFO has a formal process that is overseen by the Canadian Science Advisory Secretariat (CSAS) whereby DFO fisheries managers make formal requests for advice from DFO Science. The requests to Science are then handled through a National, Zonal or Regional Advisory Process (NAP, ZAP or, RAP) depending on the DFO jurisdictions involved. Since CESWoG was created by the Canadian Eel Working Group (CEWG), which is made up of representatives not only from DFO but the Province of Ontario and Quebec, it was decided that CESWoG would not provide formal eel science advice to DFO fisheries managers, but rather would provide information as requested from CEWG. Formal requests for eel science advice by DFO fisheries mangers would be handled through the CSAS advisory process. CESWoG would continue to meet and hold workshops to review and report on scientific information and issues arising within the field of American Eel. Beginning in 2011 CESWoG would operate under the CSAS umbrella as an expert group and future proceedings of its workshops would be published through CSAS rather than through the DFO technical report series. It was explained that other expert groups operate in such a fashion under CSAS. Modified Terms of Reference for CESWoG which have to be approved by CEWG are given in Appendix 1.

PRESENTATIONS

Update on Trap and Transfer Program

David Stanley-Ontario Power Generation

Abstract

There was no abstract for this presentation.

Discussion

An overview of the trap and transport program, where eels are captured above the Moses-Saunders Dam and transported downstream to avoid the turbines, was presented. Concern was raised that eel catch rates for 2010 were low. Presenter was unsure of the reason for the low catch rates. Questions were raised regarding the future and the viability of the program. It is a very expensive program and only a small number of eels are saved from the turbines. However, it may be more viable if larger numbers of eel could be caught. The low catch may continue to be a problem if the eels in Lake Ontario are simply not recovering. It is still considered a pilot project and a lot has been learned about transporting eels.

Does Trap and Transfer Induce Premature Silvering of the Eels and Increase the Risk of Unsuccessful Spawning Migration?

C.M. Couillard, and R. Roy-Fisheries and Oceans Canada, Mont-Joli, QC
D. Stanley-Ontario Power Generation Inc., Niagara on the Lake, ON
G. Verreault, P. Dumont, and Y. Mailhot-Ministère des Ressources naturelles et de la Faune, QC

Abstract

Ontario Power Generation sponsors an experimental trap and transfer program (T&T) to reduce American eel mortality associated with their passage through turbines of a hydroelectric power plant located on the St. Lawrence River downstream from Lake Ontario. Large yellow eels captured in Lake St. François (LSF) in early summer are trapped, tagged and transferred to a site downstream from the hydroelectric dams. This project was undertaken to assess whether the T&T induced premature silvering of the eels and increased the risk of unsuccessful spawning migration. Morphometric (gonadosomatic index) and histological (oocyte diameter, % vitellogenic oocytes) criteria were used to classify eels into four categories according to their stage of maturation: likely resident (Stage 0), intermediate (Stage I) and likely migrant (Stages II and III). Vitellogenin (VTG) concentrations were measured in plasma. This study revealed that 43% of yellow eels trapped in LSF were at an early stage of maturation (Stage I and II) and could potentially undertake migration in the year of transfer. The stage of maturation was not related to body length, condition or VTG. Silver eels from the T&T captured in the fall in the St. Lawrence Estuary were all mature eels (Stage III) and appear to have a normal rate of gonadal maturation compared to free migrant (FM) silver eels originating from Lake Ontario or the Richelieu River. T&T eels have a lower condition compared to FM from Lake Ontario. Although not statistically significant, there are some indications of possible impairment of the process of vitellogenesis in T&T compared to FM eels from Lake Ontario: T&T eels tend to have more atretic oocytes and lower plasma levels of VTG. These changes could be related either to environmental conditions in LSF or to the T&T. Further studies are underway to develop non-lethal tools to assess maturation and condition to improve eel selection for the T&T program.

Discussion

Discussion centred on whether atresia was a normal physiological event in maturing American eel. No information is available in the literature on the occurrence of oocyte atresia in American eels sampled in polluted or pristine sites. European studies showed that pre-exposure of European eels to cadmium caused oocyte atresia when maturation was induced by hormonal injections. However, it was felt that single spawners like eels were less likely to show oocyte atresia than multiple spawners, if not exposed to environmental stressors such as starvation or pollutants. Further studies are needed on the occurrence of atresia in silver eels captured at different sites. From these preliminary results, there was no indication that the transportation of the eels

significantly impaired gonad maturation. However, the impact of transporting eels on the long migration was unknown.

Update on the Status of American Eel in Ontario

Alastair Mathers-Ontario MNR

Abstract

In the Ottawa River system recent survey data and incidental observations show that eels are still present in the lower portions of the watershed but close to extirpation. At the Moses Saunders ladders, in the upper St. Lawrence River and Lake Ontario system (uSLR-LO), the numbers of smaller eels increased somewhat in recent years, but the 2000s average is 2% of the 1980s average. Trawling and electrofishing indices in the uSLR-LO during the 2000s have declined to 1% and 3% respectively relative to the 1980s. Tailwater surveys suggest that there are only 8% of the silvers leaving compared to a decade ago. A model suggests that this would be less than 20,000 silvers leaving the uSLR-LO annually.

Discussion

Ontario has a restoration strategy because of the eel's status. Eels are nearly extirpated form Lake Ontario. Research suggests that the historic range may have been much larger than traditionally believed. There have been large declines from historic levels in all indices except a recent increase in the number of eels moving up the Moses-Saunders eel ladder. It was questioned whether stocked elvers could be detected. There are no naturally occurring juvenile eels in the upper St. Lawrence. Therefore stocked eels can be identified by their size until the stocked eels begin to get as big as the eels ascending the ladder. Fishers have been asked to look for stocked eels. Also, stocked eels in Quebec were found ascending a ladder on the Richelieu River which raises the question of why that would occur and suggests that Ontario should monitor their yearly migration for stocked eels so that stocked eels are not included in their recruitment indices. In 2009, in Quebec it was shown that 38,3 % of the young eels ascending the Chambly ladder were in fact stocked above the dam, moved downstream and then climbed the ladder towards Lake Champlain, which would create a strong bias in the recruitment data series.

Update on East River Elver Project

Genna Carey and Yvonne Carey-Scotia-Fundy Elver Advisory Committee

Abstract

The presentation will discuss research projects in which elver fishers in Atlantic Canada have been involved recently. License holders have funded the East River Elver Index for the past three years, and are hoping to continue, in partnership with other funding providers. The license holders have also made operational and funding contributions to an American eel habitat research project on Oakland Lake in Mahone Bay, Nova Scotia, with key funding coming from Environment Canada in the project's inaugural year.

Discussion

No clear trend in elver abundance. However, there is a gap in the survey data. It was agreed that the survey is valuable and should continue.

Incidence of Local Quantitative Trait Differences Within a Panmictic Species: Relevance for the Conservation and Management of American Eel

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Abstract

In the absence of systematic study in American eel for genetic structure, phenotypic differences observed in this species could be explained by genetic structure. To provide a definite test of the panmixia hypothesis, we have revisited it by genotyping more than 800 glass eels from Florida to Newfoundland and 1200 otolith-aged yellow eels from Canadian watershed on 18 polymorphic microsatellites loci. Analysis confirmed the occurrence of a single, temporally stable, gene pool for the species. We also have tested the hypothesis of genetic basis for quantitative traits (growth, sex ratio, gene expression) differences between eels of distinct origins.

Discussion

Panmixia hypothesis was supported by this research. There is individual and regional variability which can be explained within the overall hypothesis of panmixia. Concern was raised that the study may have selected freshwater seeking eels only and therefore there was a bias against eels that live out their lives in estuarine or brackish waters.

Burrowing behaviour of the American eel

Jared Tomie, David Cairns and Simon Courtenay

Abstract

American eels at Canadian latitudes spend approximately 75% of their time during the yellow phase hidden in the substrate. Most captive eels given the choice of substrate chose to burrow in mud. Some eels also hid in cobble. Eels rarely burrowed in sand and never burrowed in gravel. Excavation experiments showed that eels typically burrowed in mud with their head close to the surface, often with the snout just at the surface. In winter, a visible cavity forms around burrow entrances, but there is no such cavity in summer. Eel burrows often have two or more openings. Dye experiments showed that eels buried in mud breathe by drawing water from the water column. If the head is below the surface, there is a tunnel between the surface and the mouth to permit water intake. Eels are speared through winter ice at numerous locations in bays and estuaries of the southern Gulf of St. Lawrence. Some of these sites have full strength salt water. However, analysis of eel blood showed no evidence of anti-freeze proteins. Because buried eels breathe through their mouths rather than through their skins, anoxic sediments probably do not pose a threat to overwinter survival.

Discussion

Burrowing could lead to higher exposure risk to contaminants that accumulate in the sediment. There were no observations of eels defending their burrows. “Colonial burrowing” was observed in winter when large numbers of eels are found in spring holes. If the eels are spending 75 % of their time in the sediment then the sediment is critical habitat for the eels.

MAMKA American Eel (Anguilla Rostrata) Scientific and Traditional Knowledge Collection in Insular Newfoundland

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Abstract

MAMKA has been active in the monitoring of American eel migration, documenting sexual dimorphism, and the collection of traditional knowledge in insular Newfoundland. In 2006 MAMKA began using fyke nets to monitor American eel migration in several rivers in Newfoundland. From 2007 to 2009 MAMKA researched body length/sexual dimorphism for eel collected from 6 sites across insular Newfoundland. The body length and sex relationship was examined statistically. Eel lengths varied from 321 mm to 1,029 mm with all eels greater than 450 mm identified as female; however, male and

female eel lengths overlapped within the 350-450 mm range. MAMKA has also been active in the collection, preservation, and sharing of traditional knowledge as it pertains to the American eel and Newfoundland Mi'kmaq culture. In 2010, MAMKA documented the traditional winter eel spearing harvest via video and still photography.

Discussion

The mark-recapture experiment provided very few re-captures. Tag loss could be a problem especially given the burrowing behaviour. They did not capture any elvers with their elver traps.

Detection of Anguillicola Crassus in Juvenile Eels

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Abstract

Glass eel stocking is on-going in the upper St. Lawrence River-Lake Ontario (SLR-LO) ecosystem and these eels are potentially infected with *A. crassus*. Glass eels are being released into several areas in the St. Lawrence River and eastern Lake Ontario and have been shown to be highly dispersive. About 3.9 million glass eels have been stocked into the upper St. Lawrence River and Lake Ontario since 2006. Although these eels have been extensively tested for pathogens and parasites (microscopy only), some (albeit small) risk remains that current testing could yield false negatives, in part due to the small sample size examined for parasites. In this presentation we suggest that PCR methodology is an essential adjunct to microscopy due to superior limit of detection, reduction of risk via higher sensitivity and increased sample size. We describe real-time multiplex PCR methodology, a newly developed molecular method for salmon and trout species identification to assist both industry and regulatory agencies in the detection and prevention of species substitution. The multiplex PCR method allows for rapid, high-throughput species identification even in heavily processed and mixed-species samples. An inter-laboratory study confirmed the ability of this method to identify species in a variety of commercial salmon and trout products. We also describe how it would be feasible to develop PRC methods for detection of *Anguillicola crassus* using tools such as real-time multiplex PCR, or high resolution melt analysis. We see the following steps as leading to the rapid development of a suitable assay: obtain parasite material (could do some preliminary work this fall); develop species-specific primer/probe sets; optimize reaction conditions; determine limits of detection (and hence potential for bulk sample testing); and perform validation studies and field trials. We estimate the total cost to develop assays and validate at approximately $120K including fieldwork, supplies and reagents, and an HQP stipend (MSc, PhD, PDF?). We suggest that some form of industry partnership funding opportunities (e.g. NSERC, MITACS) could be used to support the development of the assay. Finally, we suggest that an

appropriate assay could be used at a watershed level to test invertebrate/fish vectors for sourcing of clean eels and for long-term monitoring of vectors and eels in the SLR-LO ecosystem.

Discussion

Method does require sacrificing the eel.

Ontario Power Generation Action Plan Update

Ron Threader and Tom Pratt

Abstract

There was no abstract for this presentation.

Discussion

Ontario Power Generation has been stocking elvers in Lake Ontario. It was questioned whether this was a worthwhile pursuit. Elvers do not naturally occur in Lake Ontario. The east coast elvers that are being stocked may have a different sex ratio and growth rate compared to St. Lawrence eels. No data was presented supporting the hypothesis that stocking was low risk. Not clear that stocking will increase spawning biomass. Leaving the elvers in their natal rivers may result in more spawners. If the eels that were stocked were being harvested by commercial fishers then they would not contribute to local spawning population. However, some of the commercial quota was for the stocking program. It was argued that eels are a natural part of the Lake Ontario ecosystem. Having them in Lake Ontario reminds the public of the important historical and cultural significance of the species.

Are Chemical Contaminants Contributing totThe Recruitment Failure of American Eel (Anguilla Rostrata)? Progress Report on an NSERC Strategic Grant

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M. Alaee, A. de Silva- Environment Canada, Burlington ON
S.R. Bloch, N.C. Bols, S. Bromand, Y.T.J. Wong-University of Waterloo, Waterloo ON
L.E.J. Lee, S.K. Walsh-Wilfred Laurier University, Waterloo ON
C.M. Couillard, M. Lebeuf- Fisheries and Oceans, Mont-Joli QC
J. Pellerin, E. Pelletier, C. Rigaud-UQAR/ISMER, Rimouski QC

Abstract

This project is assessing the potential for toxic effects to eel embryos of chemicals accumulated by eels during their freshwater growth phase and maternally transferred to their oocytes. Large yellow or silver eels were collected in 2007 and 2008 from an array of eel habitats, including reference sites and those contaminated by industrial chemicals (e.g., Lake Ontario, the Hudson River, and Belgium (European eels). Additional large yellow eels from Lake Ontario were obtained from a frozen archive of eels collected in 1988 and 1998. These eels were analyzed to describe the spatial variation in chemical contamination and changes in contamination over time. The size and sex of all eels were recorded, otoliths were removed to determine age, and the remaining tissues were homogenized for chemical characterization, assuming a one-to-one relationship between whole body concentrations and concentrations in oocytes. Preliminary data demonstrate measurable levels of dioxin-like compounds, polybrominated diphenyl ethers (PBDEs), and other emerging brominated flame retardants (BFRs). The highest concentrations of dioxin toxic equivalent quantities (TEQs) and of PBDEs were found in eels derived from Lake Ontario, and dioxin TEQs were similar in concentration to that associated with pathology in European eel embryos. In contrast, several emerging BFRs were most concentrated in eels from the Miramichi River, New Brunswick, and least in Lake Ontario eels. Analyses of the Hudson River and Belgian eels are in progress, as well as analyses of perfluorinated organic compounds, selenium, and alkyl tin compounds. Analyses of 1988 and 1998 samples will be completed in 2010/11.

Because eel embryos are not available for testing, the toxicity of hydrophobic chemicals extractable from eel homogenates by dichloromethane was assessed by bioassays with surrogate species. Blue sac disease (BSD), the classic sign of dioxin toxicity, was assessed in Japanese medaka (*Oryzias latipes*) embryos, and behavioural pathology, a newly recognized response to neurotoxicity, was measured in mummichog (*Fundulus heteroclitus*) embryos in addition to BSD. Techniques were developed for reliably injecting eel extracts into newly-fertilized eggs, and for assessing responses of embryos after hatch. The medaka assay showed a clear and precise response to injected dioxin, but somewhat variable responses to extracts from five eels from each site. Nevertheless, the most frequent and most severe signs of BSD occurred in medaka exposed to extracts from Lake Ontario, Hudson River, and Belgian eels; the lowest responses occurred in eels from reference areas. The mummichog behavior assay

appears more sensitive to dioxin than the medaka BSD assay, and PCB congener 126, typically considered less toxic than dioxin, was equally neurotoxic, which will change the perception of the risk to fish of mixtures of PCBs and dioxins.

Discussion

Because there has been no direct evidence of recruitment failure outside the St. Lawrence, concern was raised that it may be a local problem. Exposure and effects of contaminants could be occurring post hatch or during upstream migration. The decline in some contaminants in the St Lawrence in recent decades may mean that newer “legacy” chemicals such as fluorine-containing compounds (e.g., Teflon, polytetrafluoroethylene or PTFE) could contribute to some of the observed toxic effects.

CESWoG 2011

Proposed Symposium at CESWoG 2011

Peter Hodson proposed holding a one day symposium on the effects of contaminants on eels, in conjunction with the 2011 CESWoG meeting. The symposium would provide an opportunity for Dr. Hodson's research group to report on the progress of their NSERC Strategic Grant. Others working on contaminants in eels would also be invited to submit papers. The symposium would either be a day within the CESWoG meeting or as a separate function that would be held one day prior to or immediately after the CESWoG 2011 meeting. It was generally agreed that this was a good idea and would be pursued.

Proposed Workshop at CESWoG 2011

It was proposed that a one day workshop be held during CESWoG 2011 on the subject of the elver transfers and stockings in Canada headed by Tom Pratt. Many questions arose from the results since stocking began. The need to analyze the genetic and scientific implications related to these projects was mentioned so that a common policy for the future could be agreed upon. It was commented that holding 2 special sessions in the same year might be logistically difficult. There was no objection to deferring this proposal to another time.

CESWoG co-chairing

In compliance with CESWoG Terms of Reference, Yves Mailhot, from Québec Ministère des Ressources naturelles et de la faune who acted as co-chair for the last three years, has been replaced by Tom Stewart, from Ontario Ministry of Natural Resources, for the next two years. Geoff Veinott's term as co-chair ends at the end of the 2011 meeting.

CESWoG 2011

It was agreed that CESWoG 2011 would be held in Montreal in late November.

Appendix 1. CESWoG Revised Terms of Reference

Canadian Eel Science Working Group (CESWoG)

Terms of Reference

Context

The American eel population in North America is in precipitous decline in many parts of the range. The decline, and the need for strong measures to foster recovery, was highlighted by North American eel scientists in a “Declaration of Concern” in 2003. Management agencies and stakeholders have initiated a number of measures to address threats.

In Canada, one response to the decline was formation of the Canadian Eel Science Working Group (CESWoG), made up of Canadian scientists working on eel biology. CESWoG’s first meeting was in December 2003. The objectives of CESWoG have been to review progress of eel science, coordinate scientific activities, and provide information and recommendations to management. CESWoG has reported informally to the Canadian Eel Working Group (CEWG), whose members come from the three jurisdictions with major interests in eel conservation and management (Canada, Ontario, Québec) and whose general objective is to promote eel conservation and recovery.

CESWoG has two Co-Chairs, one from the federal government and the other from a provincial government. CESWoG’s meetings have been held at the call of the Co-Chairs. CESWoG has not usually provided formal advice to management, although at its fourth meeting it responded to a series of questions from CEWG on status of eel in relation to management objectives and on research priorities. Meeting proceedings have been published in the Canadian Science Advisory Secretariat (CSAS) “Proceedings” series.

With development of a Canadian National Management Plan for American Eel and a growing focus on supporting conservation and recovery of Canada’s eel population, it is timely to review requirements for an eel science advisory group in Canada. This review is part of an overall review of governance mechanisms for eel management in Canada

Name

The name “Canadian Eel Science Working Group (CESWoG)” reflects the current and anticipated requirements for an eel science group as a forum for the reporting and exchange of scientific data on eels.

Objectives

CESWoG's general objective is to provide scientific information to management on conservation and recovery of American eel in Canada. Specific objectives are:

- to coordinate scientific efforts to increase understanding of American eel biology and impacts of threats in Canada, including coordination of monitoring programs to track eel abundance trends
- to inform managers on research and monitoring gaps and requirements and to assist in seeking funding to fill these gaps.
- to report periodically on status of American eel in Canada
- to respond to specific requests for information from CEWG
- to coordinate Canada's participation in bi-national and international forums on eel science

Chair and Membership

CESWoG will have two co-chairs, one from the federal government and one from a provincial government, named by CEWG [after consultation with CESWoG membership and the Canadian Science Advisory Secretariat]. Co-chairs will be named for a period of [two] years.

CESWoG will not have formal membership status. Any scientist working on eel biology, eel ecology or subjects related to the objectives of CESWoG (aquatic ecology, oceanography, physiology, geospatial information systems, etc) may attend CESWoG meetings and will be considered a CESWoG member for the meeting. The Co-Chairs, in cooperation with eel scientists, will maintain a roster of scientists interested in CESWoG's work and will invite relevant scientists to CESWoG meetings.

Mode of operation

CESWoG meetings will be convened when required as part of the peer review system operated by the Canadian Science Advisory Secretariat (CSAS) (housed in DFO's Science sector). Meetings will be part of the CSAS meeting roster published on the CSAS web site. Conduct of meetings and publication of results will follow CSAS procedures.

In accordance with CSAS procedures, relevant expertise from governments, universities, the private sector, stakeholder groups and internationally may be invited to meetings as long as they commit to contributing information and expertise. Meetings are not a forum for advocacy. CESWoG will publish its results in CSAS "Proceedings" series.

CESWoG meetings will be convened by the Co-Chairs when deemed appropriate, based on work to be done (requests for information, time since last meeting etc). Timing of meetings will be determined in consultation with CEWG. Co-Chairs will solicit working papers from eel scientists to be used as a basis for discussions on specific topics.

In addition to face-to-face meetings, CESWoG may hold teleconferences on priority topics at the call of the Co-Chairs.

Reporting relationships

CESWoG will report, through its Co-Chairs, to the CEWG, with respect to requests for information, timing of meetings, funding issues and other administrative matters. CESWoG Co-Chairs and CEWG will maintain a working relationship to ensure that science can respond to requests for information. One of the CESWoG Co-Chairs will attend CEWG meetings and teleconferences.

CESWoG will follow the policies, guidance and publication templates for CSAS processes and science advisory products, which will in turn expedite the publication of any CESWoG documents.

Individual CESWoG members and the Co-Chairs, as working scientists, will continue to report through their organizations.

Responsibilities of the Co-Chairs

Co-Chairs have the following responsibilities:

- to consult regularly with CEWG on eel science matters, including participating in CEWG meetings and teleconferences
- to maintain knowledge of scientists working on subjects related to CESWoG's mandate
- to convene meetings when appropriate, in consultation with CEWG, including:
    - setting an agenda in cooperation with eel scientists and CEWG
    - soliciting working papers to be used as a basis for discussions
    - ensuring that meetings are on the CSAS meeting roster
    - ensuring that relevant expertise is at the table to peer review material presented
- to chair meetings, ensuring that CSAS procedures are respected
- to ensure that meeting results are documented in CSAS series, by naming rapporteurs and providing final quality control

Responsibilities of CESWoG members

Members of CESWoG have the following responsibilities:

- to participate in review of information, based on the member's expertise and knowledge
- to contribute expertise and knowledge impartially, not to advocate any position or course of action
- to contribute technical information in the form of working papers or in other forms at the request of the Co-Chairs
- to act as rapporteur and to assist with producing meeting documents at the request of the Co-Chairs

Peer Reviewed Science Products

The Canadian Science Advisory Secretariat (CSAS) will web-publish both advance public notice of forthcoming CESWoG meetings (via CSAS Advisory Schedule) and any peer-reviewed scientific publications arising from those meetings. CESWoG will submit any potential publications using the appropriate templates supplied on the CSAS website. Web-publication functions will be achieved via the CSAS website.

http://www.dfo-mpo.gc.ca/csas/csas/home-accueil_e.htm

Appendix 2. Agenda: 8th Annual CESWoG Meeting

8th Annual Canadian Eel Science Working Group (CESWoG) Meeting
August 30, 2010
Room BCC123
200 Kent Street, Ottawa ON

AGENDA

Time	Agenda Item	Presenter
0830-0900 h	Participant arrival and room setup	
0900-0930 h	Introductions and opening remarks	**Yves Mailhot** and **Geoff Veinott**
0930-1000 h	Terms of Reference-Changes Required?	**All**
1000-1020 h	**Break**	
1020-1040 h	Update on Trap and Transfer Program	**David Stanley** and **Tom Pratt**
1040-1100 h	Does trap and transfer induce premature silvering of the eels and increase the risk of unsuccessful spawning migration?	**Catherine Couillard**
1100-1120 h	Update on Eel Abundance Indices for Ontario	**Alastair Mathers**
1120-1140 h	Update on East River Elver Project	**Genna Carey** and **Yvonne Carey**
1140-1200h	Incidence of local quantitative trait differences within a panmictic species: Relevance for the conservation and management of American eel	**Caroline Côté**
1200-1340 h	**Lunch**	
1340-1400 h	Burrowing behaviour of the American eel	**David Cairns**
1400-1420 h	MAMKA American eel (*Anguilla rostrata*) scientific and traditional knowledge collection in insular Newfoundland	**Roger Gallant**
1420-1440 h	A novel approach to rapid detection of *Anguillicola crassus* in juvenile eels	**Kevin Reid** and **R. Hanner**
1440-1500 h	Ontario Power Generation Action Plan Update	**Ron Threader and Tom Pratt**
1500-1520 h	Progress report on a project to assess whether chemical contaminants are contributing to the recruitment failure of American eel (*Anguilla rostrata*)?	**Peter Hodson**
1520-1600 h	Other Business - CESWoG 2011: Symposium: Date	**All**

Appendix 3. List of Participants

Participant list only contains information on those that signed the attendance sheet.

CESWoG 2010
PARTICIPANTS
Ottawa, August 30, 2010

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