

## CAUS 2009 AGM - Minutes

### **Thursday 30 April, 09**

Sunny, warm day.

Aquarium du Québec 1675 Ave des Hôtels  
Québec, (Québec) G1W 4S3

0800h registration opens

0915h welcome and opening remarks

Andre Roy Director, Aquarium du Québec [welcomes us to the Host facility]

Paul Boissinot D.S.O. Aquarium du Québec [our Host for the AGM]

Sherri Ferguson, President CAUS [reads her address – text in Appendix 1]

1000h Introduction of attendees and reports on past year's activities [.

Sherri Ferguson – DSO- UBC: spent year **developing new training power point for CAUS scientific diver course**, fixing **baric** chamber, & supporting physiological research at SFU.

Paul Boissinot – DSO- Quebec Aquarium & President of Quebec Diving Federation (FAQS). Has been busy at this work because of new Provincial regulations. Has been doing some interesting project on the SARA-listed box turtle for Quebec Dept. of Natural Resources.

John Lindley – DSO- Dalhousie University. Had a busy year for diving in support of a broad range of research projects. Most of the work is done by graduate students. Preparing to offer a Scientific Diving course for credit this August.

Lou Jankowski – Prof. at Concordia Univ. (retired), Consultant on diving research & development. [one of our guest speakers].

Jeffery Gallant – CGEP lecturer, President of the GEERG (Greenland Shark Research Group). Besides participating in several diving expeditions, he has updated the Diver's Almanac for 2008, and recreated the CAUS website.

Marie-Claude Morin – DSO- Explos Nature. Has been back at University this year studying kinesiology.

Richard Savignac – DSO- BioDome. Beside ongoing work maintaining the Biodome aquarium, which has been very busy this past year, he has worked on the "Copper Red Horse" (Red Knight) sucker fish, endemic to Saguenay. He has also done some work on the box turtle project in Lake Champlain & Lake Montagne.

Josh (Jocelyn) Boisivert??? – Coordinator of the Quebec Dive Medical Centre. Also serves on the Board of the FAQs. Maintains a medical 'hot-line' that provides the capacity for hyperbaric physicians to support first responders dealing with diving accidents. Is planning installation of a new Hyperbaric facility in Levis. Has also been engaged with the Introduction of a portable hyperbaric stretcher at a popular dive site in Quebec (\$100.k). It is the first in Canada.

Bruce Gray – DSO- EC-CCIW in Brantford Ontario. Oversees the work of 20 diving technicians that provide support for to researchers. Maintains a research vessel in Great Lakes. Sits on a federal inter-governmental federal diving committee.

Sairah Malkin – DSO- Waterloo University. Undertaking her post-doctoral research on . Research diving is “dead” at Waterloo, and in Ontario now. We will revisit the reasons for this later in the meeting.

1000h Guest speaker: Dr. Dominique Buteau, Hyperbaric Physician.

Reviews medical assessment of fitness to dive – the first such guidelines in Quebec. A total of 13 occupational diving mortalities in Quebec from 1982-2007 forced the issue.

Reviews Boyle's, Dalton's & Henry's laws, and their implications for human divers. Outlines all the medical implications & provides some worst case scenarios.

Reviews requirements for commercial diving medical certification: MET (Metabolic Equivalent) values of 12-13 are the fitness standard for commercial divers. e.g. 12 METs is equivalent to steady running at 12.5kph.

Describes the “Bruce” protocol for assessing fitness on a treadmill over 4 sequential stages, at different speeds and slopes - 12 minutes long: ends at 7kph @ 16% slope. There is some criticism of this because it does not have enough warm up.

Reviews Medical contra-indications to diving, to whit:

– most types of cardiovascular disease surgeries & treatments; unless you can reach 12 METs on treadmill and other indicators are sound.

-many types of cardiopulmonary disease & conditions: emphysema, history of spontaneous or traumatic pneumothorax, asthma (no clear medical guidelines on Asthma, but British say 'no' in most cases where asthma is triggered by exercise, cold or emotions).

- several ENT conditions are also contra-indicators.

- a couple of opthalmological conditions are contra-indicators

- of the endocrine conditions, certain forms of diabetes are absolute contra-indicators (e.g. insulin-treated diabetes), also hypertension and adrenal insufficiency

- certain neurological conditions are contra-indicators.

- a few psychiatric conditions are contra-indicators.

Describes a proposed diving medical examination. Considerable discussion about required tests. Only one, initial chest x-ray (life-time) is required. Long-bone x-rays are no longer required. Only 2 others: Blood work up and fasting urinalysis (detects diabetes).

Suggests 4 levels of exam: initial comprehensive (including chest x-ray); periodic – interview only (every 2y for people under 40y old, every year for people >40y old);

periodic with in depth assessments (4y for <40y old, 2y for >40y old), and extraordinary: after a trauma, disease, etc.

Question: Does the screening adequately deal with the many types of prescription drugs divers might be taking? What about Viagra for example? – Not known.

An excellent presentation!

1200h LUNCH

Paid for by our host at the aquarium cafeteria – very good!

Followed by tour of aquarium – our host dives in the large Pacific tank.

1300h (1400h) Guest speaker: Dr. Lou Jankowski, Physiologist.

Gives us a history of Decompression sickness:

1<sup>st</sup> diver was Alexander the Great – Siege of Tyre – 330-322 in the “Colimpha” a glass barrel to 10m depth. Saw fish and men and women!

1<sup>st</sup> demand valve attributed to Rouquayrol in 1660s as a coal mine rescue device.

Reviews the evolved understanding of the role of oxygen, and highlights the seminal contributions of Paul Bert 1833-1886, in his book (La Pression Barometrique 1878), Identified O<sub>2</sub> dissociation curve, hypoxia (mountain sickness), oxygen toxicity, & the essentials of DCS and its treatments

Shows how the great bridge constructions produced large numbers of men with DCS, and fostered research on same.

The terms “Bends” comes from a ladies fashion style called the “fashionable Greek Bend” – which took the form of a posture often adopted by divers suffering DCS

Highlights the contributions of John Haldane (1860-1936) to our understanding, measurement and treatment of all kinds of problems associated with illnesses and traumas associated with gases e.g. developed concept of tissue half-times, drafted the first decomp tables. Wrote the book “Organism and environment.”. His work leads to the recognition of the efficiency and mechanism of treating DCS with oxygen. Wrote the definitive treatise on the prevention of DCS:

Boycott AE, GCC Damant & JS Haldane 1908 J. of Hygiene

Brings us right up to present describing his research on experiments in the Canadian Navy research chamber using Doppler-distortion monitoring of N bubbles in the blood which lead to the DCIM tables – the safest in the world.

Applies the results to the question of the relationship between exercise at various stages in the decomp dive cycle, and DCS. Shows very strong evidence that mild exercise (~130 heart beats per minute, 5min on / 5 min off) during decompression greatly reduces the frequency of DCS. – Haldane was right!

Finishes with a discussion of dive computers.

1982: K Huggins & C Barshinger invent the dive computer, “the Edge”, consisting of a timer, very accurate pressure sensor & computer using an algorithm based on the work by Haldane: 5 tissue (compartments). Since then many other algorithms have been proposed, and computers marketed using them. E.g those by M Spencer: Doppler algorithm, AA Buhlmann: 16 compartment algorithm. RY Nishi: DCIEM algorithm. B Weinke: RGBM algorithm.

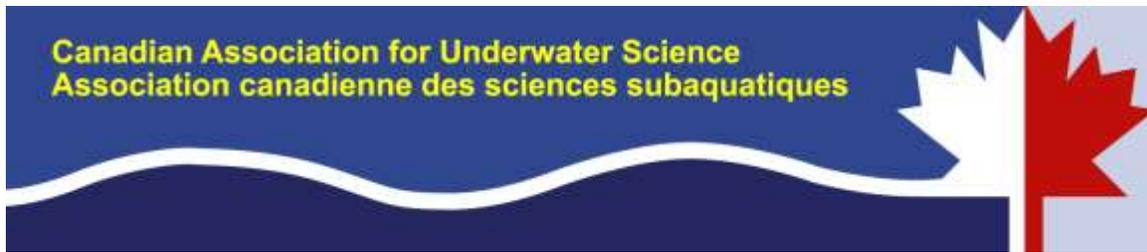
The dive computer was supposed to enhance dive safety, but due to ignorance and abuse, it has actually reduced the margin of safety offered by the, and the frequency and intensity of DCS has increased per capita.

“Natural stupidity is more frightening than artificial intelligence” Thomas A. Edison.

1600h CAUS Medial discussion round table: Following questions to Mr. Jankowski, there was an animated discussion and well informed discussion of the current status of knowledge about the medical risks, preventative measures and treatments associated with diving. The importance of fitness and planning in preventing diving accidents was recognized and emphasized.

1800h dinner at Hotel Louisbourg – Le Feu Sacré (see photos)

2000h Nitrox class taught by S. Ferguson.



## Friday 1 May, 09

Rainy day.

7 of 11 members present, therefore exceed the quorum requirement of 25% of membership. (should go with the AGM not here)

0900h review of CAUS by-laws for proposed changes

S. Ferguson reviews the By-Laws. She notes that they are 25y old, and parts are out of date.

The members read through them in detail as a group, and recommend changes in the form of motions to be proposed at the subsequent meeting of the Executive Committee to follow.

Motion for Exec.Comm. meeting regarding (c) (i): we need a form for members to sign agreeing to "Adhere to the bylaws, resolutions and regulations of the Association". It would be signed by the DSO and the head of the DSC. This form letter should be drafted by the Membership Committee, and distributed annually along with the requests for payment of dues.

It is agreed that By-Laws will be digitized and distributed to all members, and placed on the web site.

S. Ferguson and various members present suggestions for revisions to the By-Laws:  
2.01 Annual Meeting (a) strike text and replace with: "on a date determined annually at the previous AGM."

2.02 (1) strike "90" & replace with "45" days before...

2.03 (3) strike "90", replace with "45"

3.01 not a change, but recognize that "poll" includes e-mail or digital polling tools.

4.02 Term of Office (1) change from 1y to 3y: make it consistent with other sections of the document.

4.05 (1) (2) strike these clauses (President may serve more than 1 year)

4.07 (1) check with Robert Guest about the great seal of the society (BGH).

5.02 (1) strike "180" & change to "45" days (make consistent throughout document)

6.0? again, change to 45d

10.0 e-mail = "mailing" / www = "official organ"

These proposed revisions were agreed upon in principal by consensus of the members present, and will be voted upon at the meeting of the Executive Committee.

Moved to accept by J. Lindley, Seconded by S. Ferguson, carried unanimously.

It is noted that four committees are required by the By-Laws:

Executive Committee

Membership Committee

Standards & Procedures Committee (will also handle By-Laws)

Emergencies Committee

Not all of these committees are currently constituted or active. This will be resolved at the meeting of the Executive Committee.

1000h discussion of U of Waterloo / MoL situation

Sairah Malkin outlines the history of a request to the Ontario Ministry of Const OH&S (Construction) for a variance of regulations to follow the CAUS standard. Last year, the U.Waterloo dive team was shut down on a dive job by the Ontario ministry. She asks the CAUS for support in presenting a case, possibly in a court of law.

There is a large discussion about the role of the CAUS and the CAUS CoP in the various provinces.

S. Ferguson has already engaged in the process, and requests the support from the CAUS to participate more fully. The members agree to support this initiative. Indeed, it is recognized that this case poses a real challenge to the essential role of the CAUS: that is to maintain the legal basis for the safe and effective conduct of scientific diving outside of the requirements for commercial diving under established standards.

The participants recommend that another CAUS member be selected to work with Sherri and Sairah on this file: one with gravitas and a deep knowledge of the history of CAUS interventions. Francois Hazel (past president) is recommended by some, but his recent interventions gives cause for debate about his motives and modus operandi. Fred Watts is also mentioned as a good candidate.

Whoever is selected, the President is advised to keep the membership informed of progress on this file, and to keep the channel open for advice or input from all members. It is suggested that the President send a letter to all past presidents, seeking their thoughts & advice.

The members see it as essential that the aggregate statistics of Association members for the past 4y be compiled and provided to Sherri in timely fashion (B. Hatcher to take action on this).

The President thanks the Members for their support and advice.

1230h Lunch at the Aquarium cafeteria.

1300h review of Scientific Diving Standards and proposal of changes

Several minor changes are recommended to the 2004 version of the CAUS Standard:

Contents – page 14 3-2-2-6 Oxygen “provider” not “therapy”

3-2-2-3-4 change French wording to read more clearly

Preface – change “hopefully” to our “expectation”...

Page 2 definition “Officer Plongere” not “Agent plongee”

Page 2 the definition of “Live-boating” should match CSA definition.

But it is recognized that we need a definition and CoP for towed diver and support of free diver from active vessel. The Standards Committee is asked to look at this (again).

Page 10 3-1-7-3 rewrite in French

Page 10 3.2.1.1 correct the French (correct version is on line)

In English: replace “knowledgeable” with “trained in hyperbaric medicine.”

Page 11 3.2.2.1 (b) strike this clause – the diver may not have a project yet.

3.2.2.1 (f) Waiver - strike this clause? ‘Much debate, no decision. S. Ferguson will consult a risk management person on whether we need a CAUS waiver.

Page 12 3.22.2.4 insert correct French translation

Page 14 3.2.2.6 insert correct French translation

Page 3.2.3.3 modify as per Sherri’s revisions

N.B. Add CAUS-approved exams to appendices

Page 17 3.2.4 move items g & h to Special Equipment, add “etc” to lists.

Page 21 3.5.2 insert pieces on working with marine animals (Jeffery)

Page 23 4.4. Stand-by Diver: Add a clause (c) “There is a solo tethered diver working in the water”, “the divers in the water are not able to serve as dive “buddies” There is much discussion of this, because it is the root of the decision by the Ontario Construction safety board.

Page 23 4.5 rewrite French

Page 27 6.6 add “signaling device”, “accessible alternate air source”.

Page 27 6.7 specify 5y frequency for hydrostatic testing.

G. Gallant offers to standardize the naming & numbering of forms. His offer is accepted with gratitude.

There is a request for a CAUS incident report to be attached as an Appendix.

Marjorie will pick one and circulate it.

Adjourn at 1600h Fill tanks, drive to hotel.

1800h Executive Committee meeting at Hotel Acadia (all welcome to attend but only members can vote).

Present: Sherri Ferguson (President), Bruce Hatcher (Secretary), John Lindley (Treasurer), Goeffery Gallant (intended Member at Large), Richard Savignac (Chair, Standards Committee), Bruce Gray??? (observer).

Agenda – proposed by Sherri, seconded by Richard. Adopted by acclamation.

Adoption of Minutes of 2008AGM. Need to correct spelling of Richard Savignac’s name (done).

Moved for adoption by Richard, seconded by John. Adopted by acclamation.

1) President’s Report – Sherri requests an emergency deviation from By-Laws to hold this year’s AGM (because the period of notice was shorter than specified in the By-Laws. Moved by Sherri, Seconded by John. Adopted by all members.

The president proposes that the CAUS adopt a set of actions on Ontario Ministry of Labour Stop Work Order, including:

- Prepare and send a letter to the Ontario Minister of Labour stating the position of the CAUS.

- Bring aggregate CAUS diving statistics up to date in 1 month and provide a summary document (BGH to contact people requesting statistics, including those lost by previous President).
- Obtain extracts from the legislation in BC (S.Ferguson to obtain), NS (J.Lindley to obtain), & PQ (P. Bossinot to obtain), showing that the CAUS standard is accepted in law and regulation by other Provinces.
- Obtain letters from other provinces recommending adoption of the CAUS standard.
- Draft a template of a letter to be sent to the Minister of Labour by the other Ontario Universities where research diving occurs (S. Malkin to draft).
- Hold a meeting with Minister in Ottawa on June 16<sup>th</sup>.

Moved to adopt this strategy and honour these commitments by Sherri, Seconded by Bruce. Unanimous adoption, with associated commitments

Treasurer's report: (delivered by S. Ferguson – see attached statement)

1 April 2008 – 31 March 2009

Opening balance \$4,944.02

Income \$3041.41 (\$2640.00 in dues not cashed until 2009)

Expenses: \$2671.29

Balance: 3214.08 - \$1080. paid to lawyers by cheque in 2009, but not yet cashed.  
N.B. 2008 dues were not paid in 2008, but in 2009, so they will not shown on 2008 statement.

Question is asked whether accounts are done on a cash or accruals basis – not known (J. Lindley to find out).

Moved for adoption by Richard. Seconded by Paul. Unanimously endorsed.

3) Membership committee report:

P. Bossinot proposes the creation of an annually renewable Associate Membership card.

Motion: Associate members will be required to pay \$25 per calendar year for membership in the CAUS, and will receive an annually renewable membership card..

Moved by Paul. Second by Richard. Carried unanimously.

Motion: Contract will be let to the FQAS to produce the CAUS membership cards at a cost of \$8 per card in first year of membership (including shipping & handling)

Sherri \$4/renewel subsequently.

Moved by Paul, seconded by Sherri. Carried unanimously.

Follow on Motion: the Institutional membership fees be fixed at a flat fee \$250./ for all institutions.

Moved by Sherri, Seconded by John. Carried unanimously.

These changes in membership dues & procedures will be communicated in a letter to all members from the President, and on the CAUS website.

4) Emergency Procedures Committee – Marjorie will prepare a Diving Incident Mangement reporting worksheet.

5) Standards & Procedures Committee. A series of nine (9) changes to the by-laws specified at AGM were moved for acceptance by John, Seconded by Sherri and carried unanimously.

Changes to the standards proposed or discussed at today's AGM will be formalized by the chair of the Standards & Procedures Committee in consultation with the President, and circulated to members for comment.

Moved by Jeffrey that members of the Executive take a pledge to fulfill their duties as per a text to be prepared by Jeffrey & circulated for approval.

Seconded by Sherri. Carried unanimously.

Moved by Sherri that we have a monthly "Skype" computer meeting of the Executive Committee. Seconded by Paul. Carried by a majority.

#### 6 & 7) Elections

President elect: position is empty, unable to fill the position. Bruce Gray??? suggests that this is a very important position if we can fill it, because it provides a clear path of governance into the future.

Motion is made to elect a Vice president for the current year (2009), or until such time as a President elect can be found. Moved by Paul, Seconded by John, carried unanimously.

Nomination of Richard Savignac as Vice President: nominated by Paul, Seconded by John. Elected by acclamation.

Re-nomination of President: John nominates Sherri Fergusson (for a 3 year term as per the amended By-Laws). Seconded by Paul, Elected by acclamation.

Executive at Large: Jeffrey Gallant is Nominated by John Lindley, Seconded by Paul. Elected by acclamation.

Paul Bossinot is nominated as chair of the Membership Committee by John.

Seconded by Sherri. Elected by acclamation.

Goeffery nominated as chair of meetings & programs committee.

8) Next CAUS meeting and AGNM will be held on May 27-28<sup>th</sup> on the Simon Fraser University campus.

9) Any other Business: Sherri moves that GEERG be offered free institutional membership during the period that G.Gallant maintains the CAUS web site.

Seconded by John. Carried Unanimously.

Moved by John that representative of the host Institution for the AGM not be required to pay conference fees. Seconded Richard.

Sherri will write letter thanking our hosts at the Quebec aquarium

10) Moved to adjourn at 2000h carried.

#### **Saturday / Sunday : Diving excursion to Explos-Nature & Escoumins, Quebec.**

Lead by Jeffery Gallant, hosted by Majorie Maury. Beautiful scenery above and below water, great diving, gracious hospitality. Much fun had by all. See videos on CAUS web site: courtesy of J Gallant.

**APPENDICES:**

Original agenda

President's Address