



**american  
academy  
of  
gold foil  
operators**

# Gold Leaf

March 2010

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**Executive Council**

2010 – Dr. Marc Tollefson  
2011- Dr. Janet Zinter  
2012 - Dr. Dan Henry

## Minutes AAGFO Board Meeting

October 28, 2009

2PM Board Room First Floor University Hilton Hotel

- I. **Call to Order- President Ed**
- II. **Minutes of Previous Board Meeting – February 25, 2009** Approved as written.
- III. **Secretary – Treasure’s Report –**  
See distributed financial Report for details.
- IV. **Annual Meeting Reports-**  
**2009 clinical - Joseph Newell** clinical person has to shadow in the previous year  
**Scientific Sessions – Henry St. Germain-**
- V. **COMMITTEE REPORTS**  
**Education & Clinical Seminars – Joseph Newell** – Thanks to Boyd Robinson the clinic and patients are all set as are the operators. Rick Nash will have bench preps ready for students to use the EZ gold.  
**Literature & Research – Marty Anderson –**  
No Report  
**Nominating Committee – Scott Barrett -**  
proposal will be available at the Mid Winter Meeting.  
**Constitution & Bylaws – Barry Evans –**  
Previously published update will be voted on at our business meeting.  
**Inter-Academy Liaison – Andy McKibbin -**  
Nothing to report
- Nominating – Dave Thorburn-** Report will be made at Mid Winter Meeting  
**Distinguished Member – Alan Osborn-**  
Honoree is Craig Bridgeman  
**Outstanding Clinician – Dan Saucy –** Honoree is Dan Henry  
**Annual Meeting Facilitator**  
**Ron Harris – 2009 and final year!!** – look toward future options
- VI. **JOD Editorship Search Committee update – Mike Cochran** – new editor Jeff Platt from Indiana and the transition is going smoothly. Mike will continue as Assistant Editor.
- VII. **Report of the Journal – Tim Carlson** – JOD is now operating in the black. Kevin Matis is taking over more and more of the internal work of the JOD. Allan Press publishing will make it possible for the reader to establish their own log-on name and password soon. The Tucker group now includes the JOD in the one dues fee directly.
- VIII. **Web Page Report – Scott Barrett** – this last week the site got 77 visits for an average of 3 minutes. Discussed whether the webmaster needs to exercise his judgment regarding inclusion of certain photos.

**IX. Gold Leaf Report – Rick Brinker-** Rick and Bob can work out a way to publish the GL to reduce the cost. Perhaps we can mail to only life members who wish to receive the GL. Moved and voted. Note: Members are being asked during this dues billing cycle to indicate if they prefer hard copy or on line of the Gold Leaf.

**X. Old Business**

**Andy request for study of joint meeting outcome-** Andy wishes that we have another joint meeting in 2012 for NJ. Perhaps we could honor Warren and Bruce. The Tucker Academy will be asking for a bid for location. **Bruce Small** is the President and contact. BK may need to check into NJ, but Joe wants to plan it and focus on Philly. It was left that Joe Newell will see if we can hold the clinical session at Temple or at Penn.

**XI. New Business**

**New Members – review and vote**  
**Hugh Ciaburro – Montreal, Canada**  
**Mathew Henry – Vero Beach, FL**  
**Michael Meherry – Loma Linda, CA**

**XII. Other Business-**

A. 2010 Annual Meeting- The council approved the W Hotel which is directly across from UCLA Dental School as the host hotel. It was suggested for the Getty trip that we allow less than 4 hours for the tour of the museum before the dinner at 5:30 pm.

**General Comments:**

Joe Newell raised the question as to whether we want to open the meeting up to others with subjects that would be of interest. He mentioned implants. He will work with Rick Stevenson and look at the consequence of having such a meeting. Andy raised the question - if that would fall best in the Master Class session. Basically, Joe is looking at ways to bring in outsiders and expose them to Gold Foil.

B. 2011 Annual Meeting: We will check on U of Illinois for 2011, if Marquette doesn't go through.

C. CEU FOR OUR MEETINGS: Kevin Matis - for CEUs under his system we need to have at least an hour for each lecture in order to have full credit. We can lump the whole morning as long as the speakers are available.  
**ACTION: moved and voted to - “continue to work, with appreciation, with Kevin Matis on CEU management.”**

Regarding us of the CEU system through AAGFO – **“as long as one member of a study club is a member of AAGFO study clubs would be eligible for CEU.”**  
**ACTION: MOVED and Approve by vote of the council.**

C. Dues - in light of the declining financial reserves and increasing cost of operation Bob Keene suggested that AAGFO rethink the current \$60 annual dues that have been in effect for the past 30 some years.  
**ACTION: Moved and voted to increase the annual dues to \$75 US.** The secretary will make the appropriate notice that the dues increase will take affect in 2010 for the 2011 dues year.

**Meeting adjourned at 5pm**

Business meeting Thursday 730 AM

**REPORT FROM THE SECRETARY/  
TREASURER FEBRARY 24, 2010**

Our NH winter has been a bust this year with all the real snow falling well south of us. Bare ground and constant cold do make for good skating, however.

**2009 ANNUAL MEETING**

Dr. Craig Bridgeman was honored as our Distinguished Member at our annual meeting in Gaines-

ville, FL in October. Thanks to Henry St. Germain and Joe Newell, we had a very successful clinical and didactic session. Dr. Boyd Robinson's students responded with enthusiasm to our clinical session. Rick Nash's Gold Foil workshop during the clinical session gave students an opportunity to 'play' with foil. To a person, they went away excited and amazed at the prospects of using this material.

Dan Henry, our Clinician of the Year, has offered to help Dr. Robinson in following up with some support for future workshops at the University of Florida in the use of Gold Foil.

#### 2009 ANNUAL COUNCIL MEETING

A major decision coming out of the Council Meeting in Gainesville was a notice that a dues increase is to take effect for the 2011 dues. Our dues have been \$60 per year for well over 20 years. Clearly the costs of doing business have changed in that time.

Our new Annual Dues to the Academy will now be \$75.00.

Life members will still not be charged for dues. Life Membership is available to any member who has retired from active practice and who has been a member in good standing for ten [10] or more years. Requests for Life Membership must be made in writing to the Secretary. Life Members may still receive the JOD by paying the \$70 subscription fee.

#### MEMBERSHIP CURRENTLY 213 MEMBERS CHANGES -

Dr. Pam Weitzel of Contoocook, NH and Dr. James Deckman of Sequim, WA have dropped their membership.

#### IN MEMORIUM

Reports of the deaths of three of our members were received.

Dr. Alan Clarke

Dr. Ralph Tjarnberg

Dr. Alfred Schuchard

#### FINANCIAL

The net value of holdings of the academy has dropped an average of \$2,000 per year over the past 10 to 15 years. A combination of the cost of our annual meetings and the basic cost of managing the

office through postage, mailings, printing, etc has contributed to this drop.

Since we are now publishing the Gold Leaf on line our financial reports are available at either the Annual or Mid Winter meetings. Any member wishing to review the financials may do so by making a request of the Treasurer.

#### FUTURE MEETINGS

The 2010 Annual Meeting will be held at the W Hotel, Westwood region of Los Angeles, CA on Oct 20-24, 2010. Dr. Richard Stevenson is being very helpful with local arrangements. The clinical sessions will be held across the street from the hotel at UCLA.

**PLEASE MAKE YOUR RESERVATIONS EARLY. CURRENTLY 27 MEMBERS HAVE RESERVED A PLACE AT THE MEETING.**

The 2011 Annual Meeting will be at the University of Indiana, Indianapolis, IN date and hotel TBA.

The 2012 Annual Meeting will be in Philadelphia, PA – School, date and hotel TBA.

#### MISCELLANEOUS REPORTS

Life Members Report-

**Tony Romano** remains actively involved in sharing the history of the G.V. Black Study Club.

**Jim Guptill** sent some great photos of their fishing prowess.

From the Inter-Net -

We have had two requests for a referral of dentists who provide gold foil work. In addition one dentist requested an automatic condenser and made a contribution to the Academy for it.

A request was also received by a dentist from China for information on how to do foils.

#### OUR WEB PAGE

Visit our web page for recent issues of the Gold Leaf and the current membership data. Thanks to **Scott Barrett** for his great work.

**CHECK OUR WEB PAGE [www.aagfo.org](http://www.aagfo.org) FOR MEETING REGISTRATION INFORMATION AFTER MAY FIRST 2010.**

## NARWHALE RESEARCH

Dr. Fred Eichmiller

The narwhal is one of least studied and most elusive of arctic mammals. It is one of three arctic whale species along with the bowhead and its closest relative, the beluga. What is most unique about the narwhal is that it only expresses a single tooth, the upper left cuspid as a “unicorn-like” tusk that can grow to nearly three meters in length. The tusk is found almost exclusively in male narwhal, and in rare instances females may have a smaller version. There are also rare instances where a male narwhal may express two tusks, though the left is usually longer. This tusk has been the origin of many legends and much intrigue. The royal scepter of England has a narwhal tusk as its shaft and it was a highly sought novelty for nobility over the ages. There have been many theories put forward for why this tusk exists; everything from a fighting weapon to a reproductive expression of sexual dominance, but few people have studied the tusk and the narwhal behavior to validate any of these hypotheses.

My research with the narwhal started with an inquiry from Dr. Martin Nweeia, a private dentist in Sharon, Connecticut and faculty member at the Harvard School of Dentistry. Dr. Nweeia had an interest in determining why this tooth existed and how it may function in its natural environment. He sent specimens to the ADA Foundation Paffenbarger Research Center, where I was located and we were able to do detailed analysis of the structure, morphology and physical properties of the tooth tissues. One of the very interesting discoveries was that this long narrow tooth was fully innervated throughout its entire length. It contained pulp tissue made up of nerves and vasculature, like most teeth, that extended to within a few inches of the tip. Another discovery was that it was made up of similar protein and mineral found in human teeth, but that the mineral and protein distribution was opposite of that found in chewing teeth. The highest mineral “enamel-like” tissue was on the inside lining the pulp chamber while a tough protein rich “cementum-like” layer covered the outer surface. A cross section of the tooth revealed ring-like bands, much like the growth rings of a tree. These were later discovered to relate to seasonal changes in diet and could indeed be used



to determine the age the animal. The final most interesting discovery was that the dentin of these teeth contained tubules, much like those of human teeth, but these tubules extended from the pulp all the way to the surface of the tooth. This meant that there were literally millions of paths of communication between the pulp nerves and the sea, opening the possibility that this tooth could sense changes in its environment. The only way to prove this hypothesis was to do experiments on live whales and this led to several arctic expeditions.

The Canadian Department of Oceans and Fisheries has been radio tagging narwhal whales for many years in order to study migration patterns and migration shifts related to climate change. Dr. Nweeia and I were fortunate enough to be invited to join these expeditions to test our hypothesis. In 2006 we traveled to a small Inuit village called Repulse Bay, located at the top of Hudson Bay on the Arctic Circle. Working with a team of marine biologists, a veterinarian and local Inuit hunters we were able to capture five narwhal using large nets and conducted our experiments. An adult narwhal is approximately 15 feet long and weighs about a ton so it is not your normal fishing trip. Nets are set and when a whale becomes tangled they must be pulled to the surface to allow them to breathe and then towed to shore. As you might expect they are often not entirely cooperative, however when holding a male by the tusk they often become very docile. Once on shore one team attaches the satellite radio transmitter while another team takes a series of health measures and runs the tusk experiments.

The tusk experiments involved stimulating the surface of the tusk with water at different levels of salinity. An acrylic jacket was placed around the tusk and water with about twice the background level

of salt was injected. This was followed by fresh water and then repeated with the salty water. The whale was monitored using an electromyogram and electrocephalogram as well as by videotaping. An electronic equipment failure prevented collection of the physiologic data, but there was a clear reaction by the animal to the high salt water that was evident by head swinging behavior. As you might think, standing in 36 degree water next to a swing a head with a two meter tusk attached can also lead to some interesting footwork. A second expedition in the summer of 2009 was finally able to confirm this response via electrocardiogram measurements of increased heart rate during the salty water exposures. The 2009 expedition was at a location about 200 miles north of the Arctic Circle where eight whales were captured and tagged. The radio tags continue to transmit for four to six months allowing us to monitor the whale's migration to winter feeding grounds off the coast of Greenland. During this expedition we were also able to attach the first radio tag ever placed on a killer whale located in Canadian inland waters. Needless to say we did not net killer whales, but rather tagged them using radio transmitters on the end of a crossbow bolt.

In addition to our experimental data, we also spent

a great deal of time interviewing Inuit hunters and elders to learn of the whale's natural habits. The current hypothesis that is best supported by both this traditional knowledge and our data is that the tusk is primarily an expression of dominance, but also has some sensory function. The Inuit tell us it clearly is not a weapon of aggression, but that the animal has incredible and unique navigational skills that could be aided by the tusk. Enhancing navigation and survival through tusk expression would also support the expression of dominance, since the most successful navigators would be naturally selected through subsequent generations. These studies have been an incredible journey into a world few have seen, a culture few have experienced, and a part of nature that very few have observed. Like most research, answers raise additional questions and this species may never be completely understood. Fortunately the narwhal has a very short habitation range, living only in arctic waters and is not currently endangered. It is an integral part of Inuit culture and they are very protective of it; so this is one whale that has never and will never found in any aquarium or amusement park. I guess you never know where your love of teeth and natural curiosity will take you.



# *Legacies*





## Down South











