



AQUACULTURE 2007

SCIENCE FOR SUSTAINABLE AQUACULTURE

FEBRUARY 26 - MARCH 2, 2007
SAN ANTONIO CONVENTION CENTER
SAN ANTONIO, TEXAS

The International Triennial Meeting of:

**WORLD
AQUACULTURE
Society**



INCLUDING:

- World Aquaculture 2007 – The Annual International Meeting of WAS
- Annual Meeting of the National Shellfisheries Association
- Annual Meeting of the Fish Culture Section of AFS
- Aquaculture America 2007

CO-SPONSORED BY:

**NATIONAL
Aquaculture
ASSOCIATION**
One Industry. One Voice



Associate Sponsors

American Tilapia Association • American Veterinary Medical Association
Aquacultural Engineering Society • Aquaculture Association of Canada
Asian Fisheries Society • Catfish Farmers of America • Global Aquaculture Alliance
International Association of Aquaculture Economics and Management
Latin American Chapter WAS • Striped Bass Growers Association
US Marine Shrimp Farming Association • US Trout Farmers Association

In Cooperation with: Texas Aquaculture Association

AQUACULTURE 2007 – Only Once Every Three Years!

Every three years, the triennial conference is held at a venue in the United States.

In 2007, the Triennial returns to the Mainland after a great event in Hawaii.

THE TRIENNIAL IS THE LARGEST AQUACULTURE MEETING IN THE WORLD!

The Triennial is the largest aquaculture conference and tradeshow held in the world with nearly 4000 attendees from over 70 countries and even more countries are expected to have attendees at AQUACULTURE 2007. The Triennial combines the annual meetings of the National Shellfisheries Association, Fish Culture Section of the American Fisheries Society and the World Aquaculture Society. In addition to the annual meetings of the main sponsors, look what else is happening at AQUACULTURE 2007!

- AQUACULTURE AMERICA - The Annual Meeting of the U.S. Chapter of World Aquaculture Society, the National Aquaculture Association, and the U.S. Aquaculture Suppliers Association.
- The Annual Meeting of the American Tilapia Association
- Annual Meeting of the Striped Bass Growers Association
- The Annual Meeting of the U.S. Trout Farmers Association
- Special sessions organized by Aquacultural Engineering Society and International Association of Aquaculture Economics and Management
- Many other meetings of work groups, government agencies and related aquaculture activities
- Program with technical sessions and producers seminars covering virtually all species involved with aquaculture
- AND - look at all of the Associate Sponsors on the cover who are participating in the program development!

The last Triennial was held in 2004 in Hawaii where it was pronounced a huge success by the nearly 4000 people who attended.

Don't miss this Triennial!

SAN ANTONIO – RIVERWALK, ENTERTAINMENT, DINING AND HISTORY!

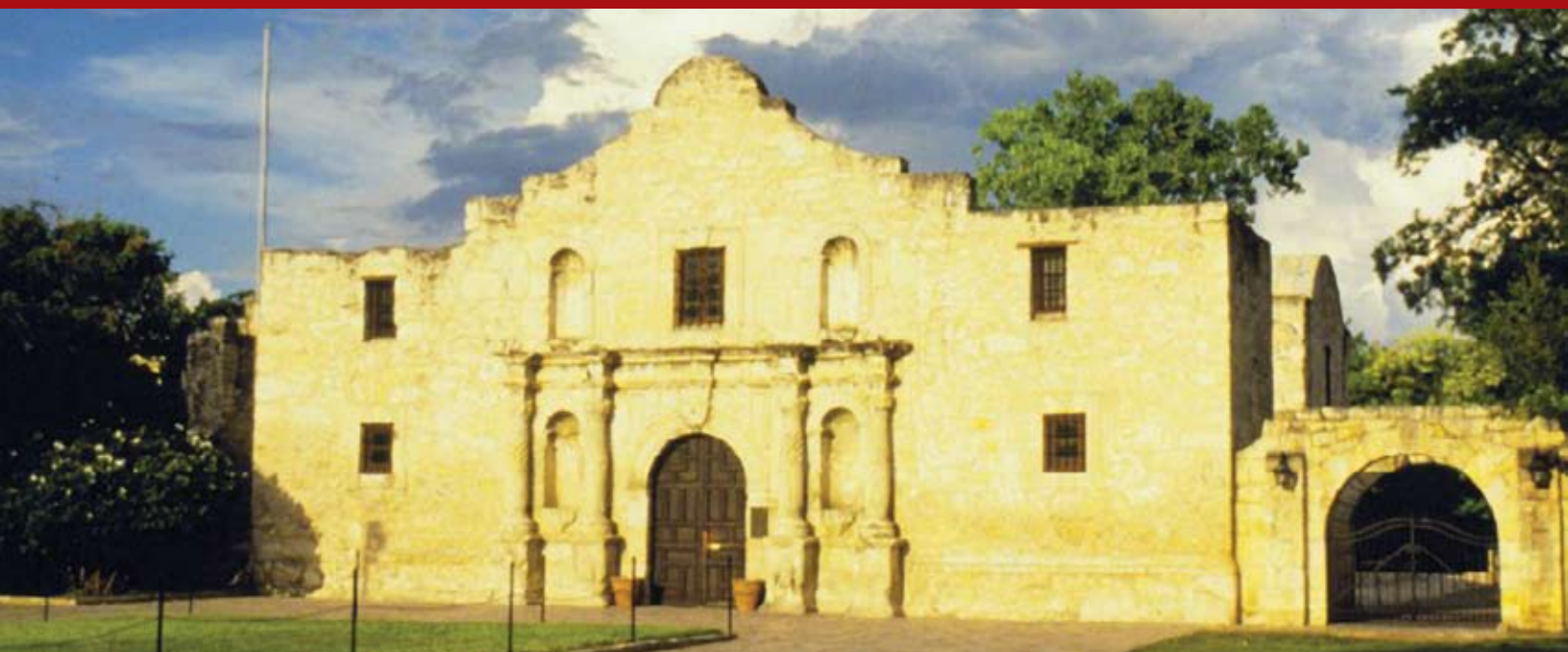
AQUACULTURE 2007 is the place to learn about the latest in aquaculture, see the newest technology in the trade show and have a great time in the many fantastic restaurants, bars and entertainment sites in San Antonio.

EXPANDED PRODUCER PROGRAM

Aquaculture America is known for the high quality of its Producer Program organized by NAA. AQUACULTURE 2007 will continue to expand the size and scope of the producer program to address all of the issues facing producers in the U.S. as well as around the world.

A CRITICAL TRADE SHOW FOR AQUACULTURISTS!

AQUACULTURE 2007 will have the largest aquaculture trade show in the Western Hemisphere and one of the largest anywhere in the world with over 200 booths! This is your opportunity to inspect the latest in products and services for the aquaculture industry. It is the place to visit current suppliers and make new contacts. To keep ahead and to keep profits building, you need to keep pace with the technological advancements in the industry - and AQUACULTURE 2007 is the place to do it!



TECHNICAL PROGRAM COVERS THE LATEST RESEARCH

The Triennial Sponsors will put together an extensive technical program featuring special sessions, contributed papers and workshops on all of the species and issues facing aquaculturists around the country. Sample topics will include:

Aquaculture Biosecurity
Best Management Practices
Biotechnological Applications
Coldwater Fish Aquaculture
Computer Technologies
Crustacean Culture
Drugs/Therapeutants
Ecological Interactions
Economics
Education Programs
Engineering

Environmental Monitoring
Extension/Technology Transfer
Farm Production
Feeds/Nutrition
Finfish Culture
Fisheries Enhancement
Genetics/Breeding
Health and Disease
Marine Cage Culture
Marketing and Promotion

Mollusc Culture
Offshore Aquaculture
Ornamentals
Policy/Regulations
Polyculture
Quality Assurance/HACCP
Shellfish Disease
Shrimp
Water Quality and Effluents
Yellow Perch & Walleye

Stay in touch with the program developments for AQUACULTURE 2007 through our Web Page at:

www.was.org

<http://www.fishculturesection.org>

www.shellfish.org



YOUR FULL CONFERENCE REGISTRATION INCLUDES:

- ❖ Admission to all sessions, seminars and the trade show.
- ❖ Admission to the President's Reception.
- ❖ Conference bag, Abstract CD and Show Directory (except for spouse)
- ❖ Refreshment Breaks and Cash Bar Happy Hour
- ❖ Students receive the full registration package plus the Student Reception. To qualify for the student rate, a copy of your student I.D. is required.

Only pre-registered attendees are guaranteed materials.



FOR MORE INFORMATION:
AQUACULTURE 2007
Conference Manager

NEW CONTACT INFORMATION
P.O. Box 2302
Valley Center, CA 92082 USA
Tel: +1-760-751-5005
Fax: +1-760-751-5003

CALL FOR PAPERS – DEADLINE: August 25, 2006

AQUACULTURE 2007 encourages the submission of high quality oral and poster presentations. We strongly encourage authors to consider poster presentations because poster sessions will be an integral part of the program. Papers submitted for “oral presentation only” may not be accepted as oral presentations due to the limited number of available time slots. **All abstracts must be in English – the official language of the conference.**

Each oral presenter shall be entitled to no more than 12 minutes for a presentation, plus 3 minutes for questions. Authors of studies involving proprietary products or formulations should present this information in workshops or the trade show. Oral presentations should use Power Point. Slides, overhead projectors and video players will not be available or allowed.

All presenters are required to pay their own registration accommodation and travel expenses.

AQUACULTURE 2007 cannot subsidize registration fees, travel or hotel costs.

No Abstract Book will be printed – a CD Abstract Book will be given to registered attendees.

INSTRUCTIONS FOR PREPARATION OF ABSTRACTS

Expanded Abstract Format - Please refer to the sample.

- 1. TITLE OF PAPER:** The abstract title is printed in CAPITAL LETTERS, with the exception of scientific names which should be Upper/lower case and *italicized* (see example). Scientific names should not be preceded or followed by commas or parentheses or other markings.
- 2. AUTHOR(S):** The first name should be the presenting author. Use * after the presenting author. Type in upper/lower case.
- 3. ADDRESS AND EMAIL:** Type only the presenting author's institution, address and email. Type in upper/lower case.
- 4. MAXIMUM LENGTH:** One Page
- 5. PAGE SIZE:** Standard 8.5 x 11 inch paper (portrait)
- 6. MARGINS:** 1-inch margin throughout (left/right/top/bottom)
- 7. SPACING:** Single spaced
- 8. PARAGRAPHS:** Paragraphs should be separated by a blank line and should not be indented.
- 9. FONTS:** Character fonts should be 12 point type.
- 10. FIGURES & TABLES:** Figures and tables are highly recommended. They should be reduced to the appropriate size for a one page abstract and should be clearly readable at the reduced size in black print only. The reduced figures and tables should be included in the abstract in camera-ready form.

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EVALUATION OF JUVENILE AUSTRALIAN RED CLAW CRAYFISH *Cherax quadricarinatus* FED PRACTICAL DIETS WITH AND WITHOUT SUPPLEMENTAL LECITHIN AND/OR CHOLESTEROL

Laura A. Muzinic*, Kenneth R. Thompson, Tracey Christian, Carl D. Webster, Lukas Manomaitis, and David B. Rouse

Aquaculture Research Center
Kentucky State University
Frankfort, KY 40601
lmuzinic@csr.net

Red claw crayfish (*Cherax quadricarinatus*) are one of more than a hundred species of Australian freshwater crayfish. However, because of its rapid growth rate, ease of spawning, wide tolerance, and dissolved oxygen tolerance, and lack of a larval stage, red claw may be the best candidate for aquaculture in the United States. Red claw are only being investigated as an aquaculture species in this country and no information exists on their nutritional requirements and practical diet formulations. Many crustaceans require lecithin and cholesterol to be added to their diet, these two nutrients are usually expensive; however, lecithin and cholesterol are very expensive. Since diet costs can be as much as 20% of the total expenses for an aquaculture enterprise, it is imperative that the least expensive diet be formulated that meets the nutrient requirements of the species. The present study was conducted to determine if cholesterol and/or lecithin needs to be added to a practical diet for red claw crayfish.

An 8-week feeding trial was conducted in a recirculating system with newly-hatched juvenile (mean body weight of 0.2 g) red claw, each stocked in individual plastic mesh culture units. Individual units were within fiberglass tanks, each containing a water line. Water was recirculated through biological and mechanical filters. Water temperature was maintained at 27-29°C and lighting was provided by overhead fluorescent ceiling lights on a 12-hour light:dark cycle. Ammonia, nitrite, nitrate, pH, oxygen, temperature, alkalinity, chlorophyll *a*, and dissolved oxygen were measured three times per week. The goal of this study was to examine the effects of growth performance of newly-hatched juvenile red claw when fed four practical diets with or without cholesterol and lecithin. Other practical diets included menhaden fish meal, soybean meal, shrimp meal, wheat flour, vitamin and mineral mix, pellet binder, cod liver oil, and corn oil (Table 1).

After 8 weeks, red claw crayfish fed a practical diet without cholesterol (Diet 3) had significantly ($P < 0.05$) lower final weight, percentage weight gain, and specific growth rate (SGR) compared to crayfish fed all other diets (Table 2). These results indicate that a practical diet containing 2% cod liver oil and 1% corn oil and having no lecithin appears to be sufficient and that lecithin may not be necessary for juvenile red claw diets.

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1 inch margin

8.5 inches wide

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PLEASE SUBMIT YOUR ABSTRACT ONLINE

**Submit your abstract via the internet at the meeting website.
Follow the complete instructions on the website for online submission.**

www.was.org

**If you are unable to submit your abstract online, contact the Conference Manager
for alternative methods at:**

worldaqua@aol.com or Fax: +1-760-751-5003



ATTENDEE REGISTRATION FORM

AQUACULTURE 2007

February 26 - March 2, 2007 – San Antonio, Texas

Return address for payments in USD:
AQUACULTURE 2007
Conference Manager
P.O. Box 2302
Valley Center, CA 92082 USA
Tel: +1 760 751 5005
Fax: +1 760 751 5003
Email: worldaqua@aol.com

- Register Online
- Please return **both sides** of this form with payment to one of the addresses above (depending on the currency used).
- Registration can be faxed (Fax: +1-760-751-5003) if paying by credit card. (**Fax both sides**).
- Use one form per person. Please copy this form for additional people.
- Cancelled registrations will receive a refund minus 20% handling. Cancellations must be in writing and be received by February 20, 2007. Refunds will be issued after the conference.

PLEASE PRINT CLEARLY OR TYPE ALL REQUESTED INFORMATION

BADGE INFORMATION: (As you want your name badge to read – No titles, please)

First Name _____ SURNAME (FAMILY NAME) _____

Company or Institution _____
(Limited to 40 Letters & Spaces)

City _____ State/Prov _____ Country _____

MAILING INFORMATION: Email _____
(please include email address)

Address _____

City _____ State / Prov _____ Postal Code _____ Country _____

Phone _____ Fax _____ Title: (circle one) Dr. Mr. Ms. Mrs.
(Include country and city code) (Include country and city code)

REGISTRATION FEES: In order to receive the discount rates as listed below, this form and payment must be received by the date listed. See 1st announcement for what is included in registration fees.

TYPE OF REGISTRATION	Register by January 5, 2007	Register by February 1, 2007	Register after February 1, 2007	
FULL CONFERENCE & TRADE SHOW In order to receive the Pre-Registration discount rate, this form and payment must be received by the date above				
ASSOCIATION MEMBER RATE*	<input type="checkbox"/> US\$ 335	<input type="checkbox"/> US\$ 435	<input type="checkbox"/> US\$ 535	* To qualify for Member Rate you <u>must</u> complete the Association Memberships section on the reverse side. • • • • • Trade Show is <u>included</u> in the Full Conference Registration Rate.
STUDENT MEMBER RATE* Include copy of Student I.D.	<input type="checkbox"/> US\$ 155	<input type="checkbox"/> US\$ 155	<input type="checkbox"/> US\$ 215	
Non-Member Rate	<input type="checkbox"/> US\$ 445	<input type="checkbox"/> US\$ 545	<input type="checkbox"/> US\$ 645	
Student Non-Member Rate Include copy of Student I.D. You can join WAS on the reverse side and use the Member Rate.	<input type="checkbox"/> US\$ 205	<input type="checkbox"/> US\$ 205	<input type="checkbox"/> US\$ 265	TOTAL REGISTRATION FEE
<input type="checkbox"/> Spouse Rate Name _____	<input type="checkbox"/> US\$ 250	<input type="checkbox"/> US\$ 300	<input type="checkbox"/> US\$ 400	US\$ _____
TRADE SHOW PASS – Good for 3 days admission to exhibits only – Feb. 27, 28, Mar. 1 (Trade show pass is included with the Full Conference Registration) <input type="checkbox"/> US\$ 50 TOTAL TRADE SHOW PASS US\$ _____				
MEMBERSHIP DUES – Enter amount from Membership Application on other side if applicable. TOTAL MEMBERSHIP DUES US\$ _____				
Do not mail registration after Feb. 8, 2007 or fax after Feb. 20. After Feb. 20, bring this form with you to register at the show.			➔ TOTAL AMOUNT US\$ _____	

Registration Confirmation and Receipt will be emailed after processing.

PAYMENT METHOD: All fees must be paid to the order of AQUACULTURE 2007.

☐ Check # _____ ☐ Visa ☐ Mastercard ☐ American Express

Card # _____ Expiration Date _____ Name on Card _____

For bank transfer details, contact us. Date _____ Signature _____

REGISTRATION FORM - SIDE 2

Name _____

ASSOCIATION MEMBERSHIPS: Please check all boxes for associations for which you are a current member. Memberships in any of those associations qualifies you for the Member rate* on the Registration Fees. You can join an association at any time before registering to qualify for the Member Rate.

- | | |
|--|---|
| <input type="checkbox"/> American Tilapia Association | <input type="checkbox"/> Latin American Chapter WAS |
| <input type="checkbox"/> American Veterinary Medical Association | <input type="checkbox"/> National Aquaculture Association |
| <input type="checkbox"/> Aquacultural Engineering Society | <input type="checkbox"/> National Aquaculture Council |
| <input type="checkbox"/> Aquaculture Association of Canada | <input type="checkbox"/> National Shellfisheries Association |
| <input type="checkbox"/> Asian Fisheries Society | <input type="checkbox"/> Striped Bass Growers Association |
| <input type="checkbox"/> Catfish Farmers of America | <input type="checkbox"/> Texas Aquaculture Association |
| <input type="checkbox"/> Caribbean Aquaculture Association | <input type="checkbox"/> US Marine Shrimp Farming Association |
| <input type="checkbox"/> Fish Culture Section - AFS | <input type="checkbox"/> US Chapter of WAS |
| <input type="checkbox"/> Florida Aquaculture Association | <input type="checkbox"/> US Trout Farmers Association |
| <input type="checkbox"/> Indonesian Aquaculture Society | <input type="checkbox"/> World Aquaculture Society |
| <input type="checkbox"/> International Association of Aquaculture Economics and Management | |

MEMBERSHIP APPLICATIONS ☐ NEW APPLICATION ☐ RENEWAL

WORLD AQUACULTURE SOCIETY (WAS) APPLICATION

www.was.org

For details on the different types of memberships and options, please contact the WAS home office at

Tel: +1-225-578-3137 Fax: +1-225-578-3493 Email: wasmas@aol.com

MEMBERSHIP CATEGORY: (Indicate only one)

- ☐ **Individual** (USD 60/yr) *Applies to an individual only*
- ☐ **Student** (USD 40/yr) *(Copy of Student ID or Signature of Professor required)*
- ☐ **Sustaining** (USD 100/yr) *Applies to any one individual from a company*
- ☐ **Corporate** (USD 250/yr) *Allows all employees of one company to attend meeting at Member Rate*
- ☐ **Lifetime** (USD 1000/yr) *Applies to an individual only*

CHAPTER OPTIONS: (Must have active membership in one of the categories at left)

- ☐ **U.S. Chapter** (USD 5)
- ☐ **Latin American Chapter** (USD 5)
- ☐ **Southeast Asian Chapter** (USD 5)

Total Amount for WAS Membership USD _____

Please enter this amount under "Membership Dues" section on opposite side of this form.

NATIONAL SHELLFISHERIES ASSOCIATION

www.shellfish.org

For details on the different types of memberships and options, please call the NSA office at:

Tel: +1-757-787-5816 Fax: +1-757-787-5831

MEMBERSHIP CATEGORY: (Indicate one only)

_____ Regular: \$85

_____ Student (\$45/yr) _____

Signature of Professor or copy of Student ID required

Includes subscription to the *Journal of Shellfish Research*

Amount Due for NSA Membership USD _____

Please enter this amount under "Membership Dues" section on opposite side of this form.

FISH CULTURE SECTION OF AMERICAN FISHERIES SOCIETY

<http://ws3.coopfish.siu.edu/fcs>

For details on memberships and options, please call the FCS office at:

Tel: +1-301-897-8616 Fax: +1-301-897-8096

_____ **AFFILIATE MEMBERSHIP:** \$50 For information on FCS Regular membership please contact AFS Home Office
(Includes only: Subscription to *The North American Journal of Aquaculture* and a copy of *Sea Fare* (the official AFS cookbook))

Amount Due for FCS Membership USD _____

Please enter this amount under "Membership Dues" section on opposite side of this form.

For membership in other associations, please contact them directly. If you need a phone number, contact the Conference Manager (+1-760-432-4270).

MANY OPPORTUNITIES FOR FARM TOURS

Some very special tours will be set up by the Texas Aquaculture Association. Details to be provided later.

TRAVEL

Special car rental fares also have been arranged with AVIS. You can make reservations at 800-331-1600 or +1-918-624-4338 and mention the special discount code# J770126.

Special airfares are available for travel within the U.S. to San Antonio. For the best airfares, contact: Flight Coordinators for details at:
Tel: 1-800-544-3644 or +1-310-581-5600
Fax: +1-310-581-5620
Email: globaltc@gte.net



HOTELS

We have arranged a block of rooms with very special rates at San Antonio hotels – close to the Convention Center. Please call the hotel directly to make your reservation and mention AQUACULTURE 2007.

Hyatt Regency San Antonio (Headquarters Hotel)

5 minutes to Convention Center
Tel: 1-800-233-1234/+1-210-227-1234
Fax: +1-210-227-4928

Hilton Palacio del Rio

1 minute to Convention Center
Tel: 1-800-445-8667/+1-210-222-1400
Fax: +1-210-270-0796

Sheraton Gunter

15 minutes to Convention Center
Tel: 1-888-999-2089/+1-210-227-3241
Fax: +1-210-227-3299

Homewood Suites Riverwalk

10 minutes to Convention Center
Tel: +1-210-222-1515 Fax: +1-210-222-1575
(includes breakfast and happy hour drinks & snacks)

The Menger

5 minutes to Convention Center
Tel: 1-800-345-9285/+1-210-223-4361
Fax: +1-210-228-0022

The Crockett Hotel

5 minutes to Convention Center
Tel: 1-800-292-1050/+1-210-225-6500
Fax: +1-210-225-6251

Red Roof Inn San Antonio

10 minutes to Convention Center
Tel: 1-800-733-7663/+1-210-229-9973
Fax: +1-210-229-9975

TENTATIVE SCHEDULE

Monday, February 26

Registration Open	11:00am - 5:30pm
Welcome Reception	6:00pm - 8:00pm

Tuesday, February 27

Registration Open	7:30am - 5:00pm
Opening Session	9:00am - 9:45am
Plenary	9:45am - 10:30am
Sessions	11:30pm - 5:30pm
Trade Show & Posters Open	10:30am - 6:00pm
Lunch (on your own)	12:30pm - 1:30pm
Student Reception/NSA Auction	7:00pm - 9:00pm

Wednesday, February 28

Registration Open	7:30am - 5:00pm
Sessions	8:30am - 4:30pm
Trade Show	10:00am - 6:00pm
Lunch (on your own)	12:30pm - 1:30pm
Happy Hour & Posters	4:30pm - 6:00pm
NAA Auction	6:00pm - 8:00pm

Thursday, March 1

Registration Open	8:00am - 3:00pm
Sessions	8:30am - 4:30am
Trade Show	10:00am - 6:00pm
Lunch (on your own)	12:30pm - 1:30pm
Happy Hour & Posters	4:30pm - 6:00pm
President's Reception	7:00pm - 10:00pm

Friday, March 2

Registration Open	8:00am - 1:00pm
Sessions	8:30am - 5:30pm
Lunch (on your own)	12:30pm - 1:30pm
Closing Happy Hour	5:30pm - 6:30pm

