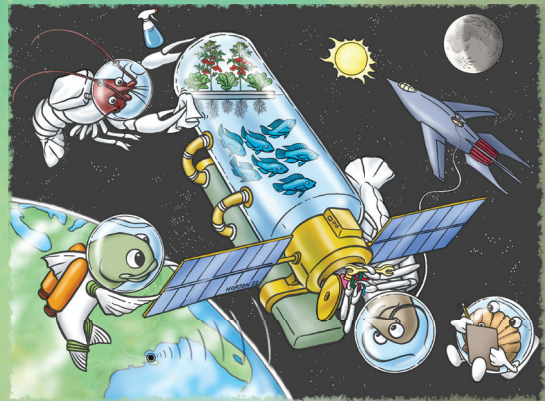


Aquaculture America 2023



Food For The Future

February 23-26, 2023

**New Orleans Marriott
New Orleans, Louisiana**

SPONSORED BY:

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Aquaculture
ASSOCIATION**



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Latin American Chapter WAS • US Trout Farmers Association



AQUACULTURE AMERICA 2023 RETURNS TO NEW ORLEANS!



AQUACULTURE AMERICA 2023

returns to one of the favorite tourist spots in the world for the only major national aquaculture conference and exposition held in the U.S. The U.S. Aquaculture Society (formerly U.S. Chapter of WAS) joins with National Aquaculture Association and the Aquaculture Suppliers Association to produce the annual Aquaculture America meetings.

The Conference is also the site for meetings organized by the Aquacultural Engineering Society, Aquatic Drug Approval Coalition, US Trout Farmers Association, Zebrafish Husbandry Association and many more associations to make Aquaculture America 2023 the one meeting in the U.S. that you don't want to miss!

A CRITICAL TRADE SHOW FOR AQUACULTURISTS

AQUACULTURE AMERICA 2023 will have the largest aquaculture trade show in the Western Hemisphere and one of the largest anywhere in the world with nearly 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

**Stay in touch with the program developments for
AQUACULTURE AMERICA 2023 through our Web Page at:**

www.was.org

NEW ORLEANS – THE BEST ENTERTAINMENT, EATING AND HISTORY!

AQUACULTURE AMERICA 2023 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 New Orleans.

EXPANDED PRODUCER PROGRAM

Aquaculture America is known for the high quality of its Producer Program organized by NAA. AQUACULTURE AMERICA 2023 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. Topics Include:

- Aquatic Animal Health
- Aquatic invasive species
- Certification Programs
- Commercial Aquaculture Health Program
- Standards
- Communications and Media
- Environmental Issues
- Endangered Species Act
- Federal Agency Town Hall Meeting

- Nutrition and Food Safety
- Lacey Act
- Marketing
- Offshore Aquaculture
- Outreach and Education
- Regulatory Issues
- Science/Public Policy
- Start-up Aquaculture

TECHNICAL PROGRAM COVERS THE LATEST RESEARCH

The U.S. Aquaculture Society 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 and throughout the world. Sample topics:

Biotechnology/Biogenetics

Crustacean genetics/selection/genomics
Finfish genetics/selection/genomics
Genetically modified organisms
Shellfish genetics/selection/genomics

Conservation/Management/ Stock Enhancement

Conservation/restoration aquaculture
Stock enhancement

Crustaceans

Species
Crawfish
L. vannamei
Macrobrachium sp.
Shrimp husbandry/production

Economics/Marketing

Aquaculture economics
Certification
Consumer perceptions of farm-raised seafood
Marketing
Organic aquaculture
Risk management

Engineering

Aquaponics
Bioflocs
Biofouling
Biofuels
Effluent waste management
Recirculating aquaculture system technology
System modelling

Finfish

Species
Baitfish
Catfish/catfish hybrids
Flatfish
Gar/paddlefish/bowfin
Largemouth bass
Marine fish
Mullet
Percids
Salmonids
Striped bass/striped bass hybrids
Sturgeon
Tilapia
Tuna
Zebrafish
Finfish husbandry/production

Food Safety

Seafood/health-related
Shellfish safety

Health/Disease

Aquaculture drugs
Aquatic animal veterinary medicine
Biofilms
Biosecurity
Crustacean bacterial diseases
Crustacean fungal diseases
Crustacean parasitic diseases
Finfish bacterial diseases
Finfish fungal diseases
Finfish parasitic diseases
Immunology/stress
Mucosal health
Physiology
Preventative medicine strategies
Shellfish bacterial diseases
Shellfish fungal diseases
Shellfish parasitic diseases
Vaccines
Viral diseases
Welfare

Nutrition

Alternative feeds
Crustacean nutrition
Feed ingredients
Finfish nutrition
Fish oil
Live feeds
Pond fertilization
Prebiotics/probiotics
Shellfish nutrition

Other Sessions

Aquaculture education
Aquaculture through the years, how I got here!
Aquaculture without Frontiers
Disaster relief
Ecology/environment
Endangered species
Extension/technology transfer
History of aquaculture
Indigenous Aquaculture
International Development
Invasive species
Ocean acidification
Outreach
Wireless/automated technologies in aquaculture

Other Species

Algae
Alligator
Amphibians
Eels
Ornamentals
Sea Urchins

Regulations/Policies/Permitting

Reproduction

Broodstock propagation/management
Crustacean reproduction
Finfish reproduction
Hatchery technology
Larval culture
Shellfish reproduction

Shellfish

Species
Abalone
Freshwater mussels
Mussels/clams/geoducks
Oysters
Pearl oysters
Scallops
Tridacna
Shellfish husbandry/production
Business Tools and the Economics of Shellfish Aquaculture

Systems

Cage culture
In-pond raceways/split-ponds
Integrated multi trophic aquaculture
Non-traditional aquaculture
Offshore aquaculture
Pond culture
Raceway culture
Recirculating aquaculture
Recreational/ornamental pond management
Robotics in Aquaculture
Small scale aquaculture
Survey Design, Implementation, and Analysis in Aquaculture
Urban aquaculture

Water Quality/Chemistry

Algal blooms
Instrumentation
Management
Methodology
Nitrogen waste management
Toxins/contaminants

CALL FOR PAPERS – DEADLINE: September 27, 2022

AQUACULTURE AMERICA 2023 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 AMERICA 2023 cannot subsidize registration fees, travel or hotel costs.

No Abstract Book will be printed – the Abstract Book will be published on the conference website www.was.org

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. The reduced figures and tables should be included in the abstract in camera-ready form.

1 inch margin (2.54 cm)

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 found in fish meal; however, lecithin and cholesterol are very expensive. Since diet costs can be as much as 70% of the total expenses for an aquaculture enterprise, it is imperative that the least expensive diet be developed that meets the nutrient requirements of the species. The present study was conducted to determine if cholesterol 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 initial weight of 0.2 g) red claw, each stocked in a 100 L plastic mesh culture units. Individual units were placed within fiberglass tanks, each containing an air pump and water line. Water was recirculated through mechanical 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, oxygen, temperature, alkalinity, chloride, and pH were measured three times per week. The growth trial 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.

1 inch margin (2.54 cm)

8.5 inches wide (21.6 cm)

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@was.org or Fax: +1-760-751-5003



ATTENDEE REGISTRATION FORM

Aquaculture America 2023

February 23-26, 2023 – New Orleans, Louisiana

Return address for payments in USD:
AQUACULTURE AMERICA 2023
 Conference Manager
 P.O. Box 2302
 Valley Center, CA 92082 USA
 Tel: +1 760 751 5005
 Fax: +1 760 751 5003
 Email: worldaqua@was.org

Online registration is preferred at www.was.org OR fax or mail both sides with payment. Use one form per person.

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 _____ <small>(Limited to 40 Letters & Spaces)</small>		
City _____	State/Prov _____	Country _____

MAILING INFORMATION: Email _____
(please include email address)

Postal 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 brochure for what is included in registration fees.

TYPE OF REGISTRATION	Register by January 25, 2023	Register by February 9, 2023	Register after February 9, 2023	
FULL CONFERENCE & TRADE SHOW <small>In order to receive the Pre-Registration discount rate, this form and payment must be received by the date above</small>				
MEMBER RATE*	<input type="checkbox"/> US\$ 495	<input type="checkbox"/> US\$ 595	<input type="checkbox"/> US\$ 695	* 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. TOTAL REGISTRATION FEE US\$ _____
STUDENT MEMBER RATE* <small>Include copy of Student I.D.</small>	<input type="checkbox"/> US\$ 270	<input type="checkbox"/> US\$ 270	<input type="checkbox"/> US\$ 325	
Non-Member Rate				
Student Non-Member Rate <small>Include copy of Student I.D. You can join WAS on the reverse side and use the Member Rate.</small>	<input type="checkbox"/> US\$ 590 <input type="checkbox"/> US\$ 330	<input type="checkbox"/> US\$ 690 <input type="checkbox"/> US\$ 330	<input type="checkbox"/> US\$ 790 <input type="checkbox"/> US\$ 390	
<input type="checkbox"/> Spouse Rate – must accompany a full registration Name _____	<input type="checkbox"/> US\$ 395	<input type="checkbox"/> US\$ 495	<input type="checkbox"/> US\$ 595	

TRADE SHOW PASS (Trade show pass is included with the Full Conference Registration)
 Good for 3 days admission to exhibits only – February 23, 24, 25 ☐ US\$ 50 **TOTAL TRADE SHOW PASS US\$** _____

INDUSTRY TOURS
 Information To Come

MEMBERSHIP DUES – Enter amount from Membership Application on other side if applicable. **TOTAL MEMBERSHIP DUES US\$** _____

Do not mail registration after February 10, 2023 or fax after February 15.
After February 15, bring this form with you to register at the show.



TOTAL AMOUNT US\$ _____

Registration Confirmation and Receipt will be emailed after processing.

CANCELLATION POLICY: Cancellation of registration must be received - in writing - no later than January 15, 2023. Refunds for registration fees will be subject to a 20% handling fee. Refunds are processed after the conference. No refund will be made for cancellations received after January 15, 2023 or for "no shows". After January 15, 2023, no refunds will be made for professional or personal emergencies, flight cancellations, denied visa, weather related cancellation or other travel emergencies. Fees for memberships are non-refundable.

PAYMENT METHOD: All fees must be paid to the order of **AQUACULTURE 2023**.

☐ Check # _____
 ☐ Visa
 ☐ Mastercard
 ☐ American Express
 ☐ Discover
 ☐ Diner's Club

Card # _____ Expiration Date _____ Sec. Code _____

Name on Card _____ Date _____ Signature _____

For bank transfer details, contact us.

REGISTRATION FORM - SIDE 2

Name _____

ASSOCIATION MEMBERSHIPS: Please check all boxes for associations for which you are a current member. Membership 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.

MEMBERSHIPS: ☐ WAS ☐ USAS ☐ APC ☐ Korean ☐ LACC ☐ African Chapter

- ☐ Aquacultural Engineering Society
- ☐ Aquaculture Association of Canada
- ☐ Aquaculture Association of South Africa
- ☐ Aquaculture Feed Industry Association
- ☐ Fish Culture Section - AFS

- ☐ Global Seafood Alliance
- ☐ National Aquaculture Association
- ☐ National Shellfisheries Association
- ☐ U.S. Trout Farmers Association
- ☐ World Aquatic Veterinary Medical Association
- ☐ Zebrafish Husbandry Association

MEMBERSHIP APPLICATIONS ☐ NEW APPLICATION ☐ RENEWAL

NATIONAL AQUACULTURE ASSOCIATION (NAA)

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

Tel: +1-850-216-2400 Fax: +1-850-216-2480 Email: naa@thenaa.net Web: thenaa.net

Individual Memberships: Individuals, growers, partnerships and corporations who engage in the practice of and who derive a portion of their income from aquaculture. Silver, Gold and Platinum members also derive income from aquaculture, but wish to increase their support of the NAA.

_____ Individual: \$250

_____ Silver: \$1,000 to \$2,499

_____ Gold: \$2,500 to \$4,999

_____ Platinum: \$5,000 and above

Total Amount for NAA Membership USD _____

Fees for memberships are non-refundable.

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

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: judya@was.org

MEMBERSHIP CATEGORY: (Indicate only one)

- ☐ **Individual** (Electronic JWAS) (USD 65/yr) Applies to an individual only
- ☐ **Individual** (E Access) (USD 45/yr) Applies to an individual only
- ☐ **Student** (Electronic JWAS) (USD 45/yr) (Copy of Student ID or Signature of Professor required)
- ☐ **Sustaining** (Electronic JWAS) (USD 105/yr) Applies to any one individual from a company
- ☐ **Corporate** (Electronic JWAS) (USD 255/yr) Allows all employees of one company to attend meeting at Member Rate
- ☐ **Lifetime** (Electronic JWAS only) (USD 1000 with no chapter) Applies to an individual only
- ☐ **Lifetime** (Electronic JWAS only) (USD 1100 with one chapter) Applies to an individual only

CHAPTER OPTIONS:

One chapter included in membership. Mark the chapter you choose.

- ☐ **Africa**
- ☐ **Asian Pacific**
- ☐ **Korea**
- ☐ **Latin American/Caribbean**
- ☐ **United States (USAS)**
- ☐ **None** (deduct USD 5)

You can add extra Chapters for USD 5

Total Amount for WAS Membership USD _____

Fees for memberships are non-refundable.

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 (+1-760-751-5005).**

INDUSTRY TOURS AND EXTRAS

TO BE ANNOUNCED



HOTELS

We have arranged a block of rooms with very special rates at New Orleans Marriott.

Booking Information TBA on website.

YOUR FULL CONFERENCE REGISTRATION INCLUDES:

- ❖ Only pre-registered attendees are guaranteed materials
- ❖ Admission to all sessions, seminars and the trade show.
- ❖ Admission to the President's Reception.
- ❖ Conference Bag and Show Directory.
- ❖ 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.

FOR MORE INFORMATION: AQUACULTURE AMERICA 2023

CONFERENCE MANAGER
P.O. Box 2302 ► VALLEY CENTER, CA 92082 USA
WORLDQUA@WAS.ORG

TENTATIVE SCHEDULE

THURSDAY, FEBRUARY 23

Registration Open	11:00am - 5:30pm
Exhibitor Move-in	11:00am - 6:00pm
Poster Set-up	1:00pm - 5:30pm

FRIDAY, FEBRUARY 24

Registration Open	7:30am - 5:00pm
Plenary Session	8:00am - 10:00am
Exhibitor Move-in	8:00am - 10:00am
Poster Set-up	8:00am - 10:00am
Refreshment Break	10:00am - 11:00am
Trade Show	10:00am - 6:00pm
Sessions	11:00am - 12:30pm
Lunch (On your own)	12:30pm - 1:30pm
Sessions	1:30pm - 4:30pm
Poster with Authors Present	5:00pm - 5:30 pm
Happy Hour	4:30pm - 5:30pm
President's Reception	6:00pm - 9:00pm

SATURDAY, FEBRUARY 25

Registration Open	8:00am - 5:00pm
Sessions	8:30am - 10:00pm
Refreshment Break	10:00am - 10:30am
Sessions	10:30pm - 12:30pm
Trade Show	10:00am - 6:00pm
Lunch (On your own)	12:30pm - 1:30pm
Sessions	1:30pm - 5:00pm
Poster with Authors Present	5:30pm - 6:00pm
Happy Hour	5:00pm - 6:00pm
NAA Auction	6:00pm - 8:00pm
Student Reception	7:30pm - 9:30pm

SUNDAY, FEBRUARY 26

Registration Open	8:00am - 3:00pm
Sessions	8:30am - 10:00am
Trade Show	10:00am - 1:30pm
Refreshment Break	10:00am - 11:00am
Sessions	11:00am - 12:30am
Lunch (On your own)	12:30pm - 1:30pm
Sessions	1:30pm - 3:00pm
Refreshment Break	3:00pm - 3:30pm
Exhibitor Move-out	1:30pm - 5:00pm
Sessions	3:30pm - 5:00pm
Closing Happy Hour	5:00pm - 6 :00pm

