World Aquaculture 2017

Sustainable Aquaculture
New Frontiers for Economic Growth
Spotlight on Africa

June 26-30, 2017

Cape Town International Convention Centre

Cape Town, South Africa

The Annual International Conference & Exposition of World Aquaculture Society

Hosted by

Aquaculture Association of Southern Africa

Department of Agriculture, Forestry and Fisheries, Republic of South Africa

Associate Sponsors

Aquaculture Engineering Society

International Association of Aquaculture Economics & Management

WorldFish

WORLD AQUACULTURE VISITS THE AFRICAN CONTINENT FOR THE FIRST TIME – CONFERENCE IN CAPE TOWN, SOUTH AFRICA

WORLD AQUACULTURE 2017 will be held in Cape Town with involvement from countries throughout the Africa continent and around the world. Aquaculture is rapidly growing in Africa and increasingly being integrated into the continent's food systems; therefore 2017 is the perfect time for the world aquaculture community to focus on Africa.

A major international trade show at WORLD AQUACULTURE 2017 is the place to learn about the latest aquaculture technologies presented by exhibitors from around the world.

Stay in touch with the program developments for WORLD AQUACULTURE 2017 through our Web Page at: www.was.org

FANTASTIC TOURIST OPPORTUNITIES IN AFRICA

Africa is an extremely diverse continent and there are too many tourist opportunities to list here – including safari's, hiking, beach/ocean experiences and many more!

SPECIAL PRODUCER PROGRAM

The AquaForum presented at World Aquaculture 2015, provided a venue for producers around the world to communicate about problems, developments and techniques. We will repeat this successful program at World Aquaculture 2017.

DR SLOANS CHIMATIRO has played a leading role in formulation of fisheries and aquaculture policy and governance programmes for the African Union. He has been instrumental in building African research institutions and networks in support of fisheries and aquaculture development, and influential in raising 'the African voice' at international fisheries and aquaculture forums. He is currently Programme Manager: Fish Trade at the World Fish Centre, Zambia, where he is responsible for the Pan-African Fish Trade Research Program, aimed at generating evidence to inform intra-regional fish trade in Africa. He has worked as a manager for a number of development programmes at regional and continental levels; and advising national fisheries institutions, as well as Regional Economic Communities (RECs) and Regional Fisheries Bodies (RFBs) on issues of fisheries and aquaculture development. As Senior Fisheries Advisor to the NEPAD Planning and Coordinating Agency, he was responsible for the NEPAD Fisheries and Aquaculture Action Plan in 2005 that was endorsed by African Union Heads of State and Governments during the Abuja Summit in August 2005, as a precursor to the current AU Fisheries Policy. Between 2006 and September 2014, he was the Head of Fisheries at NEPAD, where he was responsible for (i) the development of the African Union Policy Framework & Reform Strategy (or the Common African Union Fisheries Policy); and (ii) assisting African countries to design and implement fisheries policy and governance reforms in order to enable the sector to contribute towards the 6% CAADP annual growth target. Program Manager for FishTrade Program, he coordinated the development of the Comprehensive African Fisheries Reform Strategy (CAFRS) for the African Union. Dr Chimatiro previously served as Director of Fisheries in Malawi.

TOM HECHT has played a lead role in the development of aquaculture in southern Africa in a career spanning research, policy, development and commercial involvement. He is an emeritus Professor of Rhodes University where he helped to position the Department of Ichthyology and Fisheries Science as a regional centre of excellence in aquaculture. Tom's graduates (a remarkable 60 MScs and 28 PhDs) occupy key positions in aquaculture and fisheries in African countries and internationally. His extensive research outputs include pioneering work on African catfish and abalone culture. He has made extensive contributions to African aquaculture development including small farmer development in Malawi, a landmark review of African aquaculture for the FAO, and the establishment of the Aquaculture Association of Southern Africa. He is a former board member of the World Aquaculture Society. In recent years he has been active in aquaculture development and commercialization through Advance Africa (Pty) Ltd which is establishing a trout farm in the Lesotho Highlands and facilitating the formulation of a Marine Aquaculture Masterplan for the Seychelles.

ROHANA SUBASINGHE is a specialist in aquaculture development and aquatic animal health management. After 22 years of service, he retired from the FAO in late 2015, while serving as the Chief of the Aquaculture Branch. Since his graduation in 1980 from the University of Colombo, Sri Lanka, he has worked in all parts of the world. He joined FAO in 1994 and took responsibility for implementing projects on aquaculture and aquatic animal health at national, regional and international levels. Among others, at FAO he was also responsible for analyses of global trends in aquaculture development. He served as the FAO focal point for international and regional agencies involved in aquaculture and food security. A former teacher of the University of Colombo and the Universiti Putra Malaysia, Rohana earned his PhD from Stirling University. Rohana is a strong advocate of sustainable aquaculture and its significant contribution to poverty alleviation and food and nutrition security. His passion is to empower people engaged in small-scale aquaculture value chains. He supports responsible certification of aquaculture and is also responsible for developing the globally approved FAO technical guidelines on aquaculture certification. He served as the Technical Secretary to the Sub-Committee on Aquaculture of the Committee on Fisheries of the FAO, the only global inter-governmental forum on aquaculture, for 15 years, since its inception until his retirement. He spearheaded the development of a global partnership for aquaculture development in FAO, the Global Aquaculture Advancement Partnership (GAAP), particularly addressing the need for a concerted effort to ensure future aquaculture development will become increasingly socially acceptable, environmentally sustainable, and responsibly managed. Rohana is still contributes to the global aquaculture development agenda, as a freelance consultant.

World Aquaculture 2017

FOR MORE INFORMATION:

World Aquaculture 2017
Conference Manager
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Tel: +1-760-751-5005 • Fax: +1-760-751-5003
Email: worldaqua@aol.com
www.was.org

REGISTER EARLY AND $AVE!

CALL FOR PAPERS – DEADLINE: February 1, 2017

WORLD AQUACULTURE 2017 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.
WORLD AQUACULTURE 2017 cannot subsidize registration fees, travel or hotel costs.

No Abstract Book will be printed – an Abstract Book will be available online.

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

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Kentucky State University
Frankfort, KY 40601
lmuzinic@dcr.net

Red claw crayfish (*Cherax quadricarinatus*) are one of more than a hundred s[illegible] of Australian freshwater crayfish. However, because of its rapid growth rate, ease of spawning, wide t[illegible] and dissolved oxygen tolerance, and lack of a larval stage, red claw may be the best candidate for a[illegible] United States. Red claw are only being investigated as an aquaculture species in this country and [illegible] information exists on their nutritional requirements and practical diet formulations. [illegible] many crus[illegible] require lecithin and cholesterol to be added to their diet, these two nutrients are usually [illegible]d; how[illegible] lecithin and cholesterol are very expensive. Since diet costs can be as much as 7[illegible] [illegible]penses for an aquaculture enterprise, it is imperative that the least expensive diet h[illegible] [illegible]s the nutrient requirements of the species. The present study was conducted to deter[illegible] [illegible]/or lecithin needs to be added to a practical diet for red claw crayfish.

An 8-week feeding trial was conducted in a recirc[illegible] system with newly-hatched juvenile (m[illegible] weight of 0.2 g) red claw, each stock[illegible] plastic mesh culture units. Individual units [illegible] within fiberglass tanks, each co[illegible] water line. Water was recirc[illegible] and mechanical filters. Water te[illegible] at 27-29°C and lighting was [illegible] fluorescent ceiling [illegible] light:dark cycle. Ammonia, [illegible]gen, temperature, alkalinity, chlorid[illegible] [illegible]asured three times per week. The g[illegible] was to examine the effects of growth perfor[illegible] newly-hatched juvenile red claw when fed fo[illegible]ctical 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.

TABLE 1. Formulation of experimental diets fed to red claw crayfish.

	Diet			
	1	2	3	4
Menhaden FM	25.0	25.0	25.0	25.0
Soybean Meal	35.0	35.0	35.0	44.5
Lecithin 0.5	0.0	0.5	0.0	
Cholesterol	1.0	1.0	0.0	0.0
Other	38.5	39.0	39.5	30.5

TABLE 2. Final weight, percentage weight gain, specific growth rate (SGR), and percentage survival of red claw crayfish fed four practical diets. Means in a column with different letters were significantly different ($P < 0.05$)

	Diet			
	1	2	3	4
Final weight (g)	6.97a	6.00a	3.64b	5.11a
Weight gain (%)	3384a	2897a	1717b	2454a
SGR (%/day)	5.74a	5.66a	4.68b	5.41a
Survival (%)	76.0	64.0	56.0	80.0

1 inch margin (2.54 cm)

1 inch margin (2.54 cm)

1 inch margin (2.54 cm)

11 inches long (27.94 cm)

8.5 inches wide (21.6 cm)

SAMPLE

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

WORLD AQUACULTURE 2017

June 26-30, 2017

Register online at: www.was.org

Return address for payments in USD:
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

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 _____
(Limited to 40 Letters & Spaces)

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 **FULL CONFERENCE & TRADE SHOW** In order to receive the Pre-Registration discount rate, this form and payment must be received by the date above	**Register by April 26, 2017**	**Register by May 26, 2017**	**Register after May 26, 2017**
WAS/CHAPTER MEMBER RATE* **WAS/CHAPTER STUDENT MEMBER RATE*** Include copy of Student I.D.	☐ US$ 475 ☐ US$ 250	☐ US$ 575 ☐ US$ 250	☐ US$ 675 ☐ US$ 315
AFFILIATE MEMBER RATE* **AFFILIATE STUDENT MEMBER RATE*** Include copy of Student I.D.	☐ US$ 545 ☐ US$ 300	☐ US$ 645 ☐ US$ 300	☐ US$ 745 ☐ US$ 365
Non-Member Rate **Student Non-Member Rate** Include copy of Student I.D. ***You can join WAS on the reverse side and use the Member Rate.***	☐ US$ 580 ☐ US$ 320	☐ US$ 680 ☐ US$ 320	☐ US$ 780 ☐ US$ 390
☐ **Spouse Rate** – *must accompany a full registration* Name _____	☐ US$ 335	☐ US$ 395	☐ US$ 495

* To qualify for Member Rate you must complete the Association Memberships section on the reverse side.

Trade Show is included in the Full Conference Registration Rate.

TOTAL REGISTRATION FEE

US$ _____

TRADE SHOW PASS **(Trade show pass is included with the Full Conference Registration)**

Good for 5 days admission to exhibits only – June 27, 28, 29 ☐ US$ 50 **TOTAL TRADE SHOW PASS** US$ _____

WORKSHOPS & TOURS – TBA **TOTAL** US$ _____

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

Do not mail registration after May 15, 2017 or fax after May 15.
After May 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 May 1, 2017. 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 May 1, 2017 or for "no shows". After May 1, 2017, 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 WORLD AQUACULTURE 2017.** **For bank transfer details, contact us.**

☐ Check # _____ ☐ Visa ☐ Mastercard ☐ American Express ☐ Discover ☐ Diners Club

Card # _____ Expiration Date _____

Name on Card _____ Date _____ Signature _____

Credit Card Billing Address _____

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

AFFILIATE MEMBERSHIPS:

- ❑ Aquabio
- ❑ Aquaculture Association of Canada
- ❑ Aquaculture Association of South Africa
- ❑ Aquaculture Without Frontiers
- ❑ Asian Fisheries Society
- ❑ China Society of Fisheries
- ❑ Egyptian Aquaculture Society
- ❑ European Aquaculture Society
- ❑ Global Aquaculture Alliance
- ❑ IAFI The International Association of Seafood Professionals
- ❑ Indonesian Aquaculture Society
- ❑ Korean Aquaculture Society
- ❑ Korean Society of Fisheris and Sciences (KOSFAS)
- ❑ Malaysian Fisheries Society
- ❑ Sociedad Brasileira de Acuicultura
- ❑ Society of Aquaculture Professionals (India)
- ❑ South African Aquaculture Society
- ❑ Spanish Aquaculture Association (SEA)

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: judya@was.org

MEMBERSHIP CATEGORY: (Indicate only one)

- ❑ **Individual** (Electronic JWAS) (USD 65/yr) Applies to an individual only
- ❑ **Individual** (Printed JWAS) (USD 85/yr) Applies to an individual only
- ❑ **Student** (Electronic JWAS) (USD 45/yr) (Copy of Student ID or Signature of Professor required)
- ❑ **Student** (Printed JWAS) (USD 65/yr) (Copy of Student ID or Signature of Professor required)
- ❑ **Sustaining** (Electronic JWAS) (USD 105/yr) Applies to any one individual from a company
- ❑ **Sustaining** (Printed JWAS) (USD 125/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
- ❑ **Corporate** (Printed JWAS) (USD 275/yr) Allows all employees of one company to attend meeting at Member Rate
- ❑ **Lifetime** (Electronic JWAS only) (USD 1005/yr) Applies to an individual only

CHAPTER OPTIONS:

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

- ❑ **Asian Pacific**
- ❑ **Japan**
- ❑ **Korea**
- ❑ **Latin American/Carribean**
- ❑ **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).

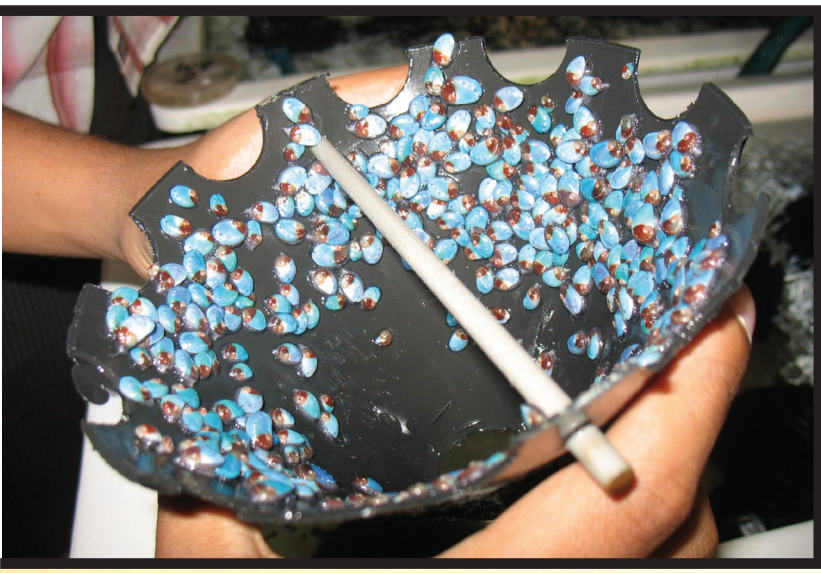
MANY OPPORTUNITIES FOR FARM TOURS

Some very special tours will be arranged. Details to be provided later – check our website for updates.

HOTELS

For hotels in Cape Town, please go to this link
https://grosvenor.eventsair.com/aquaculture-2017/landing

TRADE SHOW SCHEDULE		
JUNE 27 10:30 - 18:00	**JUNE 28** 10:30 - 17:00	**JUNE 29** 10:30 - 16:00



TENTATIVE SCHEDULE

Saturday, June 24th

WAS EXCOM	0900 - 1300
WAS Board Meeting	1200 - 1700

Sunday, June 25th

WAS Board Meeting	0900 - 1700

Monday, June 26th

Registration Open & Exhibit Set-up	1000 - 1700
Farm Tours	
WAS Business Meeting	1600 - 1700
Opening Ceremony	1800 - 1900
Welcome Reception	1900 - 2000

Tuesday, June 27th

Registration Open	0730 - 1700
WAS/AASA Awards	0900 - 0930
Plenary Sessions & Student Spotlight	0930 - 1030
Break	1045 - 1120
Trade Show Open	1030 - 1830
Sessions	1120 - 1300
Lunch (at individual expense)	1240 - 1430
Sessions	1430 - 1730
Happy Hour & Posters	1730 - 1830
Student Reception	1900 - 2100

Wednesday, June 28th

Registration Open	0800 - 1700
Keynote African Aquculture	0900 - 0940
Sessions	0900 - 1000
Break	1000 - 1030
Trade Show Open	1030 - 1830
Sessions	1030 - 1300
Lunch (at individual expense)	1300 - 1430
Keynote African Aquaculture	1430 - 1510
Sessions	1430 - 1730
Happy Hour & Posters	1713 - 1830

Thursday, June 29th

Registration Open	0800 - 1600
Sessions	0900 - 1040
Break	1040 - 1110
Trade Show Open	1030 - 1600
Sessions	1110 - 1230
Lunch (at individual expense)	1230 - 1400
Sessions	1400 - 1520
Break	1520 - 1540
Sessions	1540 - 1720
Exhibit Move-out	1600 - 1900
President's Reception	1900 - 2200

Friday, June 30th

Registration Open	0800 - 1500
Sessions	0900 - 1040
Break	1040 - 1110
Sessions	1110 - 1230
Lunch (at individual expense)	1230 - 1400
Sessions	1400 - 1540
Break	1540 - 1600
Sessions	1600 - 1720

Saturday, July 1st

Farm Tours	
WAS Board Meeting	0900 - 1700