



**Southern
African
Society of
Aquatic
Scientists**

SASAQS 2016

26-30 June 2016

Skukuza, Kruger National Park

Programme

SUNDAY 26 June 2016

15:00	Registration
18:30	Dinner

MONDAY 27 June 2016

Main hall: Session 1: Chair: Nico Smit	
08:30	Keynote [A]: Mr Dhesigen Naidoo (Water Research Commission CEO)
09:15	[1] R Hart: Evaluating the effectiveness of restorative biomanipulation management on a hypertrophic South Africa reservoir using comparative long-term cross-system analysis of remotely sensed trophic status monitoring data
09:30	[2] J King: Sustainable development, the ecosystem approach and the mystery of ten percent
09:45	[3] G Cilliers: Implementation of the national estuarine monitoring programme in South Africa: Case studies on the Berg and Breede Estuaries
10:00	[4] C Thirion: The Macroinvertebrate Response Assessment Index (MIRAI) version 2
10:15	[5] G Bate: Water quality in northern Maputaland
10:30	TEA / COFFEE / POSTER VIEWING
Main hall: Session 2: Chair: R Greenfield Ecotoxicology	
Break-away hall: Session 3: Chair: W Malherbe Ramsar Wetland Ecology	
11:00	[6] M Dlamini: Assessment of the effects of the White River Town waste water treatment works on the aquatic freshwater system, White River, Mpumalanga
	[12] W Malherbe: The investigation of selected Ramsar wetlands biodiversity status and tourism value in support of the Ramsar Convention information requirements

11:15	[7]	Jeffrey Lebepe: Bioaccumulation and human health risks upon consumption of <i>Oreochromis mossambicus</i> from the Olifants River system	[13]	E Bester: Diversity of aquatic macroinvertebrates in the Ntsikeni Nature Reserve
11:30	[8]	N Odume: Functional response of communities of the family Chironomidae to deteriorating ecosystems health in an effluent impacted river, Eastern Cape, South Africa	[14]	K Dyamond: Macroinvertebrate diversity within the Makuleke Wetlands in the Pafuri region of Kruger National Park
11:45	[9]	P Mensah: Use of the indigenous freshwater shrimp <i>Caridina nilotica</i> as a standard test organism for ecotoxicological studies in South Africa	[15]	A Kock: Diatom diversity and water quality in the Makuleke Wetlands
12:00	[10]	C Curtis: Hydrochemistry of headwater streams in the central Magaliesberg Biosphere Reserve	[16]	J Beukes: Health Assessment of fishes from coastal lakes on the east coast of South Africa
12:15	[11]	A Lenkwe: Is there a correlation between the colour of sample water and dissolved organic carbon (DOC) in mountainous catchments under contrasting land uses at the Cathedral Peak Research Site (CPRS), Drakensberg?	[17]	M Fernandes: Distribution of vegetation along a salinity gradient at the Kosi Estuarine Lake
12:30	LUNCH / POSTER VIEWING			
	Main hall: Session 4: Chair: Ecotoxicology (continued)		Break-away hall: Session 5: Chair: Tally Palmer Water and Ecosystem Science: Transdisciplinary research in catchments as complex social-ecological systems.	
13:30	[18]	TL Botha: Comparative aquatic toxicity of gold nanoparticles and ionic gold using a species sensitivity distribution approach	[26]	C Palmer: Transdisciplinary approaches to loosening intractable environmental water quality problems in South Africa
13:45	[19]	V Wepener: Aquatic risk assessment of pesticides using a Weight of Evidence approach: The Crocodile River Irrigation system case study	[27]	M Weaver: Towards understanding the emergence, practice and learning of civil society organisations in response to water service delivery challenges in small post-Apartheid municipalities
14:00	[20]	I Govender: Ecological Risk Assessment of the Resource Directed Measures for the uMngeni Catchment	[28]	M Wolff: The tale of communities in the Tsitsa River catchment: A dam with the possibility of uplifting communities or a development that leaves communities fragmented and disappointed?

14:15	[21] N Vogt: Screening of aryl hydrocarbon ligands in sediment from three South African harbours	[29] N Libala: Hill slope seeps functionality as key ecological infra-structure - facilitating co-development of restoration and protection of hill slope seeps as part of live-stock practice in the upper Mzimvubu river catchment, Eastern Cape, South Africa
14:30	[22] R Gerber: Stable Isotopes reveal long term human impacts in lowland rivers of the Kruger National Park	[30] T Keighley: Mining, agriculture and natural resources in the Upper Komati Catchment: contestations in a complex social-biophysical system
14:45	[23] G Jansen van Rensburg: Biomarker Responses in <i>Caridina nilotica</i> from the Lower Phongolo River Floodplain	[31] P Ntloko: The development of macroinvertebrate based novel approaches for evaluating and predicting functional and structural ecological effects of settled and suspended solids in selected South African rivers
15:00	[24] C Grainger: The development and application of periphyton indicators of flow and nutrient alterations for the management of water resources in South Africa	[32] N Mgaba: Impact of agriculture activities on salinity of the Kat River
15:15	[25] L Sikutshwa: Platannas mixing it up; phylogeography of the African clawed frog, <i>Xenopus laevis</i>	
15:30 to 16:30	TEA / COFFEE / POSTER VIEWING	

TUESDAY 28 June 2016

	Main hall: Session 1: Chair: Wynand Vlok	
08:30	Keynote [B]: Prof JHJ van Vuren - Ecotoxicology in conservation areas	
09:15	[33]	L de Necker: An ecological assessment of selected ephemeral pans located on the Phongolo River floodplain
09:30	[34]	T Dube: Macroinvertebrate species and functional diversity in temporary pans along a gradient of lateral connectivity with the Phongolo River
09:45	[35]	N Wolmarans: Organochlorine pesticide bioaccumulation and biomarker responses of two amphibian species from the KNP and Phongolo floodplain
10:00	[36]	E Netherlands: Northern KwaZulu-Natal, a hotspot for frogs and their blood parasites
10:15	[37]	NJ Smit: Aquatic parasitology in a changing world: biological consequences of climate change
10:30	TEA / COFFEE / POSTER VIEWING	

	Main hall: Session 2: Chair: Victor Wepener Estuarine Ecology	Break-away hall: Session 3: Chair: V Munnik WRC workshop: The role of science in environmental decision making and the link between the mining industry, research institutions and government.
11:00	[38] Alan Whitfield: Impediments and imperatives around fish conservation in South African estuaries	Mr B Madikizela: Welcome and workshop objectives
11:15	[39] JB Adams: Persistence of mangroves along the east coast of South Africa	Overview TBC: Overview
11:30	[40] DA Lemley: Linking catchment agriculture with eutrophication in two Eastern Cape estuaries	W Roets: Mining and wetland: “Method in the madness of Water use Authorisation” perspective from government
11:45	[41] L Human: The water quality status of selected micro inlets and estuaries along the eastern cape coast of South Africa	J van der Waals: Wetland delineation and conservation challenges in mining
12:00	[42] M Magoro: The impact of introduced largemouth bass <i>Micropterus salmoides</i> on indigenous estuary-associated fish in the lower Kowie River, South Africa	TBC: Mining and agriculture
12:15	[43] G Matcher: Next generation sequencing approaches for analysing the response of bacterial communities to agricultural and urban impacts in temperate estuaries	TBC: Mining and industry
12:30	LUNCH / POSTER VIEWING	
	Main hall: Session 3: Chair: Invasive species in South Africa	Break-away hall: Session 3 (continued)
13:30	[44] D Woodford: Managing invasive fishes with socio-economic value - a wicked problem for aquatic conservation	TBC: The coherent use of spatial information for wetlands (the atlas)
13:45	[45] A Nunes: The invasive Australian redclaw crayfish (<i>Cherax quadricarinatus</i>) in South Africa	A de Klerk: Environmental infrastructure and its significance
14:00	[46] P Ndaleni: Dam driven invasions of an Eastern Cape River	V Munnik: Mining/biodiversity/Society

14:15	[47]	L Mofu: Life-history traits of <i>Glossogobius callidus</i> a highly successful coloniser of irrigation impoundments: using life-history traits in predicting future invaders	Discussion
Main hall: Session 4: Chair: S Marr Long-term monitoring of the Lowveld reaches of the Olifants River and its tributaries: The way forward - an open discussion			
14:30	[48]	T Mohlala: Are contemporary monitoring methods able to detect expected losses of aquatic biodiversity? Insights from the analysis of 6 years of river health data from the Lower Olifants River	Discussion
14:45	[49]	S Marr: Long-term monitoring of the Lowveld reaches of the Olifants River and its tributaries: A preliminary assessment of the first 5 years A Swemmer, T Mohlala and SM Marr	
15:00	[50]	A Swemmer: Long-term monitoring of the Lowveld reaches of the Olifants River and its tributaries: The way forward - an open discussion	
15:20	TEA / COFFEE / POSTER VIEWING		

WEDNESDAY 29 June 2016

Main hall: Session 1: Chair: W Malherbe Swimways			
08:30	Keynote [C]: Hermann Wannigen: Swimway of the world. Optimizing the policy cycle to open-up rivers for migratory fish		
09:00	[51]	G O'Brien: Swimway programme for the use and protection of migratory fishes and their ecosystems	
09:15	[52]	K Brink: Swimways: a global initiative to simulate river connectivity and fish migration management	
09:30	[53]	P Schollema: Unravelling the life stories of freshwater fish. What monitoring techniques can we use?	
09:45	[54]	L Barkhuizen: A qualitative and quantitative analysis of historic commercial fisheries in the Free State Province in South Africa	
10:00	[55]	W Evans: When in Doubt or Drought: What to do for the Threatened Fish Populations of KZN?	
10:15	[56]	M Desai: Environmental water requirements to maintain the wellbeing key social and ecological endpoints in the Dinder River, Blue Nile Basin.	
10:30	TEA / COFFEE / POSTER VIEWING		

	Main hall: Session 2: Chair: Aquatic Invertebrates	
11:00	[57]	R Wasserman: Increased male copepod vulnerability to predation in arid ephemeral aquatic environments
11:15	[58]	S Kubheka: Developing and testing the congruency of selected biological indicators and an existing tool designed to assess wetland health in agricultural settings in the KZN Midlands
11:30	[59]	T Molepo: A preliminary assessment of the invertebrate communities in temporary wetlands in Mankweng, Limpopo, South Africa
11:45	[60]	P Mnisi: A study of the free-living copepods in Turfloop dam, Limpopo Province, South Africa
12:00	[61]	T Dalu: Understanding changes in ephemeral pond trophic structure in relation to hydroperiod
12:15	[62]	R Lerm: Pilot study investigating scope for the long-term monitoring of dragonflies (Odonata) in the Ukhahlamba Drakensberg World Heritage Site, Cathedral Peak, South Africa
12:30	LUNCH / POSTER VIEWING	
	Main hall: Session 3: Chair: Aquatic Invertebrates (continued)	
13:30	[63]	O Agboola: APPLICABILITY OF THE USE OF MACROINVERTEBRATES BIOLOGICAL INDICES IN SAND DOMINATED lowland rivers in KwaZulu-Natal
13:45	[64]	L Khuzwayo: Do seasonal changes in pH affect the distribution of Ephemeroptera (Mayfly) species in the Waterberg headwater streams?
14:00	[65]	M Vezi: Response of invertebrates to changes in water quality and flows in KwaZulu-Natal river dominated estuaries
14:15	[66]	G Snow: Macroinvertebrate community response to physico-chemical conditions in the Olifants River (East) catchment
14:30	[67]	L Mnisi: Towards the development of an aquatic toxicity index for macroinvertebrates
14:45	[68]	T Bellingan: The effect of consecutive rotenone treatments on the invertebrate fauna of the Rondegat River, Western Cape, South Africa
15:00	[69]	S Venkata: Molecular analysis of cyanobacterial diversity in Northern Maputoland: Assessing the potential for the production of harmful cyanotoxins
15:15	TEA / COFFEE / POSTER VIEWING	
15:45	SASAgS AGM	
19:00	GALA DINNER	

Poster list

0002	The feeding ecology of <i>Gilchristella aestuaria</i> and <i>Atherina breviceps</i>, with emphasis on potential competition in the Kariega Estuary, South Africa <u>Nokubonga Mbandzi</u> ^{1,2} , Alan Whitfield ² , Ryan Wasserman ² , ¹ University of Fort Hare, Alice, South Africa, ² South African Institute for Aquatic Biodiversity (SAIAB), Grahamstown, South Africa
0009	A comparison of sampling techniques for headwater stream fish surveys <u>Bianca Hannweg</u> ^{1,2} , Lesley Bloy ^{1,2} , Bruce Ellender ² , Ryan Wasserman ² , Olaf Weyl ^{2,1} , ¹ Rhodes University, Grahamstown, South Africa, ² SAIAB, Grahamstown, South Africa, ³ Center for Invasion Biology, Grahamstown, South Africa

0010	<p>An assessment of the driving factors of non-native fish invasion fronts <u>Lesley Bloy</u>^{1,2}, Bianca Hannweg^{1,2}, Bruce Ellender^{2,3}, Olaf Weyl^{2,3}, ¹Rhodes University, Grahamstown, South Africa, ²SAIAB, Grahamstown, South Africa, ³CIB, Stellenbosch, South Africa</p>
0012	<p>Using functional responses to assess predator hatching phenology implications for pioneering prey in arid temporary pools <u>Ryan Wasserman</u>^{1,2}, Mhairi Alexander^{3,4}, Daniel Barrios-O'Neill⁵, Olaf Weyl^{1,2}, Tatenda Dalu^{1,6}, ¹South African Institute for Aquatic Biodiversity (SAIAB), Grahamstown, South Africa, ²Centre for Invasion Biology, South African Institute for Aquatic Biodiversity (SAIAB), Grahamstown, South Africa, ³Centre for Invasion Biology, Department of Botany and Zoology, Stellenbosch University, Stellenbosch, South Africa, ⁴Institute for Biomedical and Environmental Health Research (IBEHR), School of Science and Sport, University of the West of Scotland, Paisley, UK, ⁵Institute for Global Food Security, School of Biological Sciences, Queens University, Belfast, UK, ⁶Department of Zoology and Entomology, Rhodes University, Grahamstown, South Africa</p>
0018	<p>The biomarker response of AChE inhibition activity of fish caught from the Groot Letaba River <u>Millicent Kekana</u>¹, Antoinette Jooste¹, Abe Addo-Bediako¹, ¹University of Limpopo, Polokwane, Limpopo, South Africa</p>
0019	<p>Impact of water and sediment quality on metal bioaccumulation and pesticide exposure of two fish species from the Steelpoort River, Limpopo province Elle Makushu¹, <u>Antoinette Jooste</u>¹, Abraham Addo-Bediako¹, ¹University of Limpopo, Polokwane Limpopo, South Africa</p>
0023	<p>Evaluation of the health of four fish species from two impoundments of the Olifants River, Limpopo River System, South Africa, using the Health Assessment Index protocol <u>Abraham Addo-Bediako</u>¹, Antoinette Jooste¹, Wilmien Luus-Powell¹, ¹University of Limpopo, Sovenga, Limpopo Province, South Africa</p>
0025	<p>New species of <i>Lovenula raynerae</i> (Copepoda) from ephemeral freshwater systems <u>Tatenda Dalu</u>¹, Eduardo Suarez-Morales², Ryan J Wasserman³, ¹Rhodes University, Grahamstown, Eastern Cape, South Africa, ²El Colegio de la Frontera Sur (ECOSUR)-Chetumal, Chetumal, Quintana Roo, Mexico, ³South African Institute for Aquatic Biodiversity, Grahamstown, Eastern Cape, South Africa</p>
0029	<p>Diversity of monogenean parasites of <i>Barbus</i> spp. as biological indicators along the Limpopo and Olifants River systems <u>Modibe Raphahlelo</u>¹, Moses Matla¹, Iva Prikrylova^{2,3}, Antoinette Jooste¹, ¹University of Limpopo, Polokwane, Limpopo, South Africa, ²North West University, Noth West, Potchesfroom, South Africa, ³Mazaryk University, Kotlarska, Brno, Czech Republic</p>
0030	<p>Quantifying the impacts of invasive <i>N₂-fixing Acacia mearnsii</i> on suspended sediment loads and nutrient enrichment status in mountain streams of the Cape Floristic Region, South Africa <u>Kenwinn Wiener</u>¹, John P Simaika¹, Shayne Jacobs¹, ¹Stellenbosch University, Stellenbosch, South Africa</p>
0031	<p>Nitrogen inputs from invasive <i>Acacia mearnsii</i> litter into fynbos streams <u>Moegamad Zaid Railoun</u>¹, Shayne Jacobs¹, John Pascal Simaika¹, ¹Stellenbosch University, Cape Town, South Africa</p>

0035	<p>Water resource management and policy - exploring the role of environmental ethics in sustainable ecosystem management in South Africa</p> <p><u>Nelson Odume</u>¹, Chris De Wet¹, ¹Unilever Centre for Environmental Water Quality, Institute for Water Research, Rhodes University, Grahamstown, South Africa</p>
0056	<p>A HOT TOPIC: The thermal preferenda and tolerances of indigenous freshwater fishes in the Cape Floristic Region</p> <p><u>Jody-Lee Reizenberg</u>^{1,2}, Helen Dallas², Jeremy Shelton^{2,3}, ¹University of Cape Town, Cape Town, Western Cape, South Africa, ²Freshwater Research Centre, Cape Town, Western Cape, South Africa, ³Stellenbosch University, Stellenbosch, Western Cape, South Africa</p>
0058	<p>Macroinvertebrate biodiversity, biotope associations and selected environmental variables in the Marico River, South Africa</p> <p><u>Hilde Kemp</u>¹, Corrie Wolmarans¹, Victor Wepener¹, Kenne De Kock¹, ¹North-West University, North-West Province, South Africa</p>
0062	<p>Metal bioaccumulation in selected intertidal filter feeders from the east coast of South Africa.</p> <p><u>Catharina Johanna Greyling</u>¹, Wynand Malherbe¹, Victor Wepener¹, ¹North West University, Potchefstroom, South Africa</p>
0071	<p>The aquatic macroinvertebrate diversity and physical parameters in the Loop Spruit and Mooi River, North-West Province</p> <p><u>Johannes H Erasmus</u>¹, Kenne' N de Kock¹, ¹Unit of Environmental Sciences and Management, North-West University, Potchefstroom, South Africa</p>
0072	<p>The aquatic macroinvertebrate diversity and selected abiotic factors of the Mooi River catchment area, North-West Province, South Africa.</p> <p><u>Uanè Pretorius</u>¹, Kenne' N. de Kock¹, ¹Unit of Environmental Sciences and Management, North-West University, Potchefstroom, South Africa</p>

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