

**11th International Conference on the Applications of Stable Isotope Techniques to Ecological Studies (IsoEcol 2018).**

**WWW.ISOECOL.COM/2018**

**30 July – 3 August 2018**

**Universidad Andrés Bello, Viña del Mar, Chile.**



## **PROVISIONAL ORAL PRESENTATION SCHEDULE**

[www.IsoEcol.com/2018/IsoEcol2018\\_Schedule.html](http://www.IsoEcol.com/2018/IsoEcol2018_Schedule.html)

## Programme schedule Monday 30 July 2018

Mon 30.7.18	Activity	Abstract code
08:00 – 09:30	Registration	
09:30 – 10:00	Welcome and opening ceremony	
10:00 – 11:00	Plenary 1: Diane O'Brien. Stable Isotope ratios as biomarkers of diet in human health research.	
11:00 – 11:30	Coffee break	
<b>Session</b>	<b><u>New methods and models in isotope ecology I</u></b>	<b>Chair: Jason Newton</b>
11:30 – 11:45	* <i>Baptiste Le Bourg</i> . Preservation methodology and stable isotope composition in sea stars: Can museum collections be useful for trophic ecology studies?	BG417CT
11:45 – 12:00	<i>Stanislas Dubois</i> . Do isotopic spaces represent food webs properties? A theoretical framework seeking for empirical data.	GN842TF
12:00 – 12:15	<i>Leonard Wassenaar</i> . The new Titanium Method: a simple, one-step reduction of aqueous NO <sub>3</sub> <sup>-</sup> to N <sub>2</sub> O for IRMS or Laser-based analysis of δ <sup>15</sup> N, δ <sup>18</sup> O, and δ <sup>17</sup> O.	JP719KM
12:15 – 12:30	<i>Xinhua He</i> . Nano-scale secondary ion mass spectrometry (nano-SIMS) images can differentiate soil organo-mineral complexes and associated carbon preservation.	JT236HR
12:30 – 12:45	<i>Alicia Guerrero</i> . Applying the Bayesian mixing model MixSIAR to fatty acid and stable isotope data to estimate diet of Antarctic seals	KT184TD
12:45 – 13:00	<i>Trevor Krabbenhoft</i> . Integrating gene expression with stable isotopes and other trophic ecology datasets: a conceptual and quantitative framework	MC498KN
13:00 – 14:00	LUNCH (provided)	
<b>Session</b>	<b><u>Isotope ecology from individuals to communities I</u></b>	<b>Chair: Sarah Bury</b>
14:00 – 14:15	* <i>Jessica Johnson</i> . Compound-specific isotope analysis of amino acids indicates human dietary exposures in a clinical feeding study.	BD235BG
14:15 – 14:30	<i>Keith Hobson</i> . Using stable carbon and hydrogen isotope analyses of lipids and breath CO <sub>2</sub> to infer sources of fueling in migratory birds and insects.	BL192BS
14:30 – 14:45	<i>Alexei Tiunov</i> . Isotopic outliers: detecting functional rarity.	BR957JM
14:45 – 15:00	<i>Laurent Simon</i> . Food webs in subterranean ecosystem: is omnivory a necessity in extreme low-productivity environment?	CC493DH
15:00 – 15:15	* <i>Yota Harada</i> . The food web consequences of a massive dieback of mangrove forest in the Gulf of Carpentaria, Australia.	CJ139HR
15:15 – 15:30	<i>Kelton McMahon</i> . Amino acid isotopes in penguin feathers reveal a history of climate change and historic whaling in the Antarctic Peninsula.	CQ278PJ
15:30 – 15:45	<i>Brian Hayden</i> . Climate and productivity drive regime shifts in subarctic lake food webs.	CS989PF

Mon 30.7.18	Activity	Abstract code
15:45 –16:00	<i>Maria Ana Correia</i> . Detecting the "famine relief diet" through stable isotope analysis: a case study from tropical Africa	DB878NJ
<b>16:00 – 16:30</b>	<b>Coffee break</b>	
<b>Chair: Sebastian Klarian</b>		
16:30 – 16:45	<i>Luis Huckstadt</i> . Trophic web overlap between southern elephant and crabeater seals.	DD228KR
16:45 – 17:00	* <i>Adelaide Dedden</i> . Diet as an important factor of male status in the southern elephant seal ( <i>Mirounga leonine</i> ).	DN845BH
17:00 – 17:15	<i>James Ehleringer</i> . Deciphering the significance of intrapopulation variations in plant carbon isotopes.	FP269RJ
17:15 – 17:30	<i>Ming-Tsung Chung</i> . Fish physiological responses to environmental changes revealed by otolith metabolic proxy.	FQ985RG
17:30 – 17:45	<i>Melanie Maraun</i> . Adaptation of compound-specific amino acid analyses ( <sup>13</sup> C and <sup>15</sup> N) for analyzing the structure of soil animal food webs .	GJ369SG
17:45 – 18:00	* <i>Veronica Radice</i> . Shifts in trophic strategies of reef-building corals following seawater temperature anomaly.	HB134TQ
<b>Session</b>	<b>Soil isotope ecology</b>	<b>Chair: Verónica Molina</b>
18:00 – 18:15	<i>Anton Potapov</i> . Uncovering soil food webs using bulk natural stable isotope composition	GM262JJ
18:15 – 18:30	* <i>Giovanny Mosquera</i> . How do wetlands and grasslands influence the ecohydrological functioning of the Andean Paramo?	PD387PF

**19:00 – 21:00**    **Poster session 1**  
**Isotope ecology from individuals to communities A**  
**Soil isotope ecology**  
**Archaeology and palaeoecology**



## Programme schedule Tuesday 31 July 2018

Tues 31.7.18	Activity	Abstract code
08:45 – 09:00	Welcome and announcements	
09:00 – 10:00	Plenary 2: <b>Pablo Sabat. Evolutionary and phenotypic responses to the use of marine resources in terrestrial songbirds: lessons from isotopic ecology</b>	
<b>Session</b>	<b>Isoscapes and movement ecology</b>	<b>Chair: Keith Hobson</b>
10:00 – 10:15	<i>Tim Jardine</i> . Applications of sulphur isotopes in freshwater food webs.	BD181CN
10:15 – 10:30	<i>Daniel Gorman</i> . Land-ocean connectivity in a Brazilian subtropical bay: using $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ isoscapes to link terrestrial inputs, algae and benthic consumers.	BD564GS
10:30 – 10:45	<i>Hannah Vander Zanden</i> . The geographic extent of solar energy effects on California avian populations.	FK877SK
10:45 – 11:00	<i>Clive Trueman</i> . Models, migration and connectivity.	GK821CT
<b>11:00 – 11:30</b>	<b>Coffee break</b>	
11:30 – 11:45	<i>Gabriela Nardoto</i> . Source-consumer isoscapes reveal an uncoupling of energy and protein inputs in human diet with local carbon and nitrogen sources in Brazil .	HB774GP
11:45 – 12:00	* <i>Nicolas Lazerini</i> . Can we track livestock mobility using high-resolution of C & N isotopic analysis of keratin? A case study using GPS tracking in the Mongolian Altai	KN537RG
12:00 – 12:15	<i>Sarah Bury</i> . Latitudinal isotopic variability in Southern Ocean suspended particulate organic matter validates Southern Ocean isoscapes and informs humpback whale trophic ecology.	LL458LQ
12:15 – 12:30	<i>Katie St John Glew</i> . New methods of isoscape development: the good, the bad and the variability.	MC576SB
12:30 – 12:45	<i>Yanina Poblete</i> . Intraspecific variation in exploratory behavior and elevational affinity in <i>Zonotrichia capensis</i> .	TD383JN
<b>Session</b>	<b>Biogeochemical cycles and global change</b>	<b>Chair: Len Wassenaar</b>
12:45 – 13:00	<i>Jonathan Grey</i> . Carbon, chironomids, and climate change.	BL746MJ
<b>13:00 – 14:00</b>	<b>LUNCH (provided)</b> <b>Lunchtime presentations: Tribute to Brian Fry</b> <i>Tim Jardine</i> . Writing the isotope symphony: Brian Fry's legacy. <i>Brian Fry</i> . "ISOTOMICS" or reading the big books (tomes) of position-specific isotope analysis (PSIA) information; initial amino acid PSIA studies of fish and prawns from a marine food web, Moreton Bay, Australia.	
14:00 – 14:15	<i>Ayumi Hyodo</i> . Does biochar amendment reduce $\text{N}_2\text{O}$ emissions by stimulating the last step of denitrification? - A study using position-specific N isotopic composition.	CR667HQ
14:15 – 14:30	<i>Francisco Fernandez</i> . Stable water isotope as climate tracers in the Laclavere Plateau, Antarctic Peninsula.	DR395CT
14:30 – 14:45	<i>Lixin Wang</i> . Non-rainfall water origins and formation mechanisms in the Namib Desert.	FT283GP
14:45 – 15:00	<i>Kebonyethata Dintwe</i> . Isotopic analysis of soil organic carbon: critical insights into belowground tree-grass interactions in savanna ecosystems	HB243PK

<b>Tues 31.7.18</b>	<b>Activity</b>	<b>Abstract code</b>
15:00 – 15:15	<i>Cristian Vargas</i> . Applications of carbon stable isotopes in marine carbonate system and ocean acidification studies.	LT199NM
15:15 – 15:30	<i>Jorge Nimptsch</i> . $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ isotope proportion in effluents of land based fish-farms in north-Patagonian streams	PJ825KJ
15:30 – 15:45	<i>Leandro Bergamino</i> . Geochemical evidence of predominantly autochthonous organic carbon contributions to the sedimentary organic matter pool of Laguna Garzon in Uruguay	RR699JL
15:45 – 16:00	<i>Carolyn Kurlle</i> . Reconstructing decades of food web structure in the North Pacific and Bering Sea using bulk and compound-specific stable isotope analyses from archived northern fur seal teeth.	SB899CP
<b>16:00 – 16:30</b>	<b>Coffee break</b>	
<b>Session</b>	<b>Microbial isotope ecology</b> <i>Chair: Claudio Quezada- Romegialli</i>	
16:30 – 16:45	<i>Seth Newsome</i> . Examining the role of gut microbes in host protein metabolism: linking microbial community composition with amino acid $\delta^{13}\text{C}$ analysis.	BF872QQ
16:45 – 17:00	* <i>Inga Conti-Jerpe</i> . Nitrate assimilation in aposymbiotic corals	PF117QF
<b>Session</b>	<b>Plant isotope Ecology</b> <i>Chair: Francisca Santana</i>	
17:00 – 17:15	* <i>Philipp Gieseemann</i> . A multi-element stable isotope natural abundance approach indicates partial mycoheterotrophy for Central European <i>Equisetum</i> species.	DF178QN
17:15 – 17:30	<i>Oliver Kracht</i> . Wood Analysis: advances in bulk analytical techniques and considerations on accuracy of isotope ratio determination.	LG975HN
17:30 – 17:45	<i>Gerhard Gebauer</i> . Stable isotopes elucidate more and more facets of mycoheterotrophic carbon gain among plants.	LL741NK
<b>Session</b>	<b>Physiology and biochemistry</b> <i>Chair: Claudio Latorre</i>	
17:45 – 18:00	* <i>Teresa Nuche-Pascual</i> . Amino acid-specific $\delta^{15}\text{N}$ trophic enrichment factor in fish fed with formulated diets varying in protein quantity and quality.	BD665RK
18:00 – 18:15	* <i>Michael Fox</i> . Amino acid $\delta^{13}\text{C}$ analysis reveals trophic plasticity in a common reef-building coral.	CK268QN
18:15 – 18:30	<i>John Whiteman</i> . Advancing physiology: a single-sample method to measure the metabolic water contribution to animal body water.	GK166JM
<b>19:00 – 21:00</b>	<b>Poster session 2</b> <b>Biogeochemical cycles and global change</b> <b>Isoscapes and movement ecology</b> <b>Isotope ecology from individuals to communities B</b> <b>Microbial isotope ecology</b> <b>Physiology and biochemistry</b> <b>Plant isotope ecology</b> <b>Tribute to Brian Fry</b>	
<b>18:45 – 20:30</b>	<b>Workshop 3 - attendance by pre-registration only.</b>	

## **Wednesday 1 August**

### **Field trips**

[http://isoecol.com/2018/IsoEcol2018\\_Field-Trips.html](http://isoecol.com/2018/IsoEcol2018_Field-Trips.html)

Trip 1: Casablanca Valley vineyard tour

Trip 2: City tours of Viña del Mar and Valparaíso

Trip 3: Hiking in the La Campana Mountain National Park

Trip 4: Pablo Neruda cultural tour – Isla Negra and Pomaire

Trip 5: Sea fishing

## Programme schedule Thursday 2 August 2018

Thurs 2.8.18	Activity	Abstract code
08:45 – 09:00	Welcome and announcements	
09:00 – 10:00	Plenary 3: <b>Andrew Jackson. Using ecological theory to maximise information recovery from stable isotope data.</b>	
<b>Session</b>	<b>Isotope ecology from individuals to communities II</b> <b>Chair: Brian Hayden</b>	
10:00 – 10:15	<i>Rachel Welicky.</i> Do "tongue-biters" bite their hosts? The use of stable carbon and nitrogen isotope analyses to describe the foraging strategies of fish parasitic cymothoid isopods with respect to attachment site.	HJ879HN
10:15 – 10:30	<i>Gilles Lepoint.</i> Macrofauna as vectors of seagrass organic matter transfer in <i>Posidonia oceanica</i> macrophytodebris accumulation	HN764SK
10:30 – 10:45	* <i>Jessica Duffill Telsnig.</i> Estimating contributions of pelagic and benthic pathways to consumer production in coupled marine food webs	HT414NN
10:45 – 11:00	<i>Andrew Revill.</i> Trophic interactions of deep-sea (200 – 3 000 m) benthic fauna identified from compound specific stable isotope analysis of amino acids.	HT639TT
<b>11:00 – 11:30</b>	<b>Coffee break</b>	
11:30 – 11:45	* <i>Matthew Tietbohl.</i> Insights from compound-specific isotope analysis into the nutritional ecology of herbivorous reef fishes.	JD316QP
11:45 – 12:00	<i>Iván González Bergonzoni.</i> Aliens vs. Fish: An invasive Asian mussel ( <i>Limnoperna fortunei</i> ) alters food webs, and trophic niche in native fish species that partially limit their abundances.	PR477PD
12:00 – 12:15	* <i>Matthew Cobain.</i> The forgotten dimension: how important is time to isotope ecology?	KR282MS
12:15 – 12:30	<i>Igor Eulaers.</i> Temporal food web changes in Greenland's priority marine conservation regions: Insights from bulk and compound-specific stable isotopes and fatty acids.	LJ986LR
12:30 – 12:45	<i>Brian Hunt.</i> Integrated stable isotope approaches to full salmon life history analysis.	LM579GP
12:45 – 13:00	* <i>Bobby Nakamoto.</i> Freshwater particulate organic matter and trophic webs in a riverine watershed.	LP717MC
<b>13:00 – 14:00</b>	<b>LUNCH (provided)</b> <b>Lunchtime presentations: Tribute to Marilyn Fogel</b> <b><i>Seth Newsome. Figure(d) it out: the pioneering career of Marilyn Fogel</i></b>	
	<b>Chair: Tracey Rodgers</b>	
14:00 – 14:15	<i>Francisco Squeo.</i> A positive relationship between plant height and leaf $\delta^{13}\text{C}$ at the species- and community-level in the Atacama Desert.	NG427HP
14:15 – 14:30	* <i>Benjamin Lejeune.</i> Global food web alteration following goldfish introduction in palmate newt dominated pond ecosystem.	PB481SP
14:30 – 14:45	<i>Carlos Polo.</i> Trophic inferences of lionfish in the Colombian Caribbean from stable isotope analysis.	PB521LP
14:45 – 15:00	* <i>Margaux Mathieu-Resuge.</i> Local and oceanic inputs into the trophic ecology of two bivalve species in a coastal lagoon: evidences from stable isotope, fatty acid and compound specific isotope analyses.	PG695LJ
15:00 – 15:15	* <i>Matthew Ramirez.</i> Intrapopulation variation in resource use by Kemp's ridley sea turtles revealed through combined skeletal and stable isotope analyses.	PG853GT

Thurs 2.8.18	Activity	Abstract code
15:15 – 15:30	* <i>Kate Tuckson</i> . Translocated top predator, the Tasmanian devil shows seasonal niche flexibility.	PH662NN
15:30 – 15:45	<i>Loïc Michel</i> . Environmental parameters and biotic interactions influence chemosynthesis-based food webs supporting deep-sea cold seeps communities off West Africa.	PM136FK
15:45 – 16:00	* <i>Natasha Phillips</i> . Bulk & CSIA reveals the complex trophic ecology of ocean sunfishes, identifying global ontogenetic patterns.	PM534GP

**16:00 – 16:30 Coffee break**

Session	Archaeology and Palaeoecology I	Chair: Paul Szpak
16:30 – 16:45	<i>Jessica Metcalfe</i> . 'Meat of the matter': the effects of seasonal selectivity, food storage, and tissue turnover rates on human paleodiet reconstructions	CD322BH
16:45 – 17:00	* <i>Emma Elliott Smith</i> . Amino acid d13C analysis quantifies environmental change in a nearshore ecosystem through the Late Holocene.	CP894RG
17:00 – 17:15	<i>Christophe Snoeck</i> . From Tarapacá to Stonehenge – the challenge of mummies and cremated bones	DF579HT
17:15 – 17:30	* <i>Chantel Michelson</i> . Deciphering millennial-scale Antarctic ecosystem change using amino acid stable isotope analysis of modern and ancient penguin eggshell.	DH387GF
17:30 – 17:45	<i>Hervé Bocherens</i> . Isotopic insight on the palaeobiology of late Pleistocene giant ground sloths in the southern Cone of South America.	HK144TC
17:45 – 18:00	<i>Claudio Latorre</i> . A rodent midden leaf-wax $\delta^2\text{H}$ record reveals shifting sources of tropical moisture over the last 1700 yrs. in the Andes of northernmost Chile.	JM669GQ
18:00 – 18:15	<i>Carola Flores</i> . Nearshore paleoceanographic conditions and human adaptation on the coast of the Atacama Desert (Taltal, 25°S) during the Early and Middle Holocene. Oxygen Isotope Analyses ( $\delta^{18}\text{O}$ ) on <i>Fissurella maxima</i> shells	KL574MN
18:15 – 18:30	<i>Priscilla Wehi</i> . Tracking trophic shifts through time in a threatened parrot.	KQ362QL

**19:00 – 21:00** **Poster session 3**  
**Isotope ecology from individuals to communities C**  
**New methods and models in isotope ecology**

**18:45 – 20:30** **Workshop 4 – attendance by pre-registration only.**





## Programme schedule Friday 3 August 2018

Fri 3.8.18	Activity	Abstract code
08:45 – 09:00	Welcome and announcements	
09:00 – 10:00	Plenary 4: Tamsin O'Connell. The isotopic complexity of complex organisms.	
<b>Session</b>	<b>Archaeology and Palaeoecology II</b>	<b>Chair: Tamsin O'Connell</b>
10:00 – 10:15	<i>Francisca Santana-Sagredo</i> . Stable isotope analysis in the Atacama Desert (northern Chile): complexities and challenges for archaeological and Andean studies.	NP958NT
10:15 – 10:30	<i>Elise Dufour</i> . Past Camelid herding and ritual practices on the northern coast of Peru revealed by stable isotopic analysis.	PF886LQ
10:30 – 10:45	<i>Fernanda Falabella</i> . Isotopic data on human mobility in prehispanic communities in Central Chile.	PM776NK
10:45 – 11:00	* <i>Jonathan Nye</i> . Humans, climate, pinnipeds, and their isotopic relationships from the Holocene to the Anthropocene in Tierra del Fuego.	QK265DT
<b>11:00 – 11:30</b>	<b>Coffee break</b>	
11:30 – 11:45	* <i>Juliette Funck</i> . The life and times of a mummified steppe bison ( <i>Bison priscus</i> ) from Arctic Alaska told through his isotopic and molecular chemistry.	RL891JR
11:45 – 12:00	<i>Matthew Wooller</i> . Tracking 30 years of movement and feeding ecology of a 17,000 year old woolly mammoth ( <i>Mammuthus primigenius</i> ) from Arctic Alaska.	TC791GF
<b>Session</b>	<b>New methods and models in isotope ecology II</b>	<b>Chair: Tim Jardine</b>
12:00 – 12:15	<i>Sarah Magozzi</i> . How do behaviour, the environment and physiology interact to produce variance in tissue isotopic compositions?	MS271PD
12:15 – 12:30	<i>Helen Atkinson</i> . Improvements in sensitivity in IRMS measurements.	PC961KT
12:30 – 12:45	* <i>Alexi Besser</i> . An essential amino acid $\delta^{13}\text{C}$ library for tracing the importance of biofilms and biocrusts in aquatic and terrestrial ecosystems.	PM343KG
12:45 – 13:00	<i>Sebastien Lefebvre</i> . Are my isotopic inferences distorted? Quantification of the isotopic anamorphosis at intra- and inter-species levels.	PP234RC
<b>13:00 – 14:00</b>	<b>LUNCH (provided)</b>	
14:00 – 14:15	<i>Sam Barker</i> . Introducing ArDB: the cutting-edge analytical results database and data visualisation software from Elementar.	QF351SF
14:15 – 14:30	<i>Pierre Cresson</i> . Functional traits unravel temporal changes in fish biomass production on artificial reefs.	SL154BM
14:30 – 14:45	<i>Christopher Brodie</i> . Advances in NCS analysis in EA-IRMS for Ecological Applications: Getting more for less with ultra-high sensitivity.	TT488FT
<b>Session</b>	<b>Isotope ecology from individuals to communities III</b>	<b>Chair: Jon Grey</b>
14:45 – 15:00	<i>Kirsteen MacKenzie</i> . Structure, function and pelagic-benthic coupling in the Norwegian Arctic marine ecosystem.	KC958RR

Fri 3.8.18	Activity	Abstract code
15:00 – 15:15	*Christine Weldrick. Inter- and intraspecific variability in isotopic niche widths of Southern Ocean pteropods.	PR859RC
15:15 – 15:30	Pablo Cardenas. The effects of C3 versus C4 plant biomass on a granivorous small mammal community in the Chihuahuan Desert	QF773SB
15:30 – 15:45	Diana Szteren. Intra and interspecific trophic niche overlap between South American fur seals and sea lions in Uruguay	QH421PR
15:45 – 16:00	Sebastián Klarian. Feeding habits and bioenergetics insights of jack mackerel ( <i>Trachurus murphyi</i> ) in south eastern Pacific waters.	RD181SP
<b>16:00 – 16:30</b>	<b>Coffee break</b>	
16:30 – 16:45	Jost Borcharding. Combined stomach content and stable isotope analyses suggests that marked dietary overlap between invasive and non-invasive species may be mediated through habitat segregation	RF458BD
16:45 – 17:00	Nicole Colin. Impact of recycled water on the trophic interactions among top consumers in a semi-arid region.	RS269RQ
17:00 – 17:15	Amanda Demopoulos. Food-web dynamics and isotopic niches within two deep-sea canyons and adjacent slope habitats.	SC272KF
17:15 – 17:30	*Ingrid Rabitsch. Stable isotopes and stoichiometric analysis reveal ecosystem level impact of invasive raspberry species on Darwin warbler finch in native <i>Scalesia</i> forest	SM157HH
17:30 – 17:45	Lorrie Rea. Enhancing the interpretation of bulk (C and N) isotope oscillations in whisker samples from Steller sea lions using compound specific nitrogen isotope analyses of amino acids	ST933GS
17:45 – 18:00	Chris Harrod. Estimating jellyfish trophic position using bulk and amino acid $\delta^{15}\text{N}$ reveal strong and repeated agreements between methods, but marked differences between jellyfish species and capture locations.	JD938LT
<b>18:10 – 19:00</b>	<b>Closing ceremony and presentation of awards</b>	
<b>20:00 – very late</b>	<b>Conference dinner and party at Valparaíso Sporting Club (Derby Room)</b>	

