

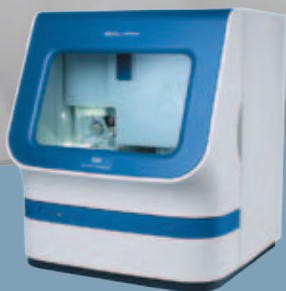
*Bharrock 2011*

FOURTH INTERNATIONAL  
**BARCODE OF LIFE**  
CONFERENCE **ADELAIDE AUSTRALIA 2011**  
[www.dnabarcodes2011.org](http://www.dnabarcodes2011.org)



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international  
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OF LIFE



The  
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Barcode of Life  
Project (iBOL)

Welcomes you to Adelaide

We hope that your time at the 4th International Barcode of Life conference is informative and productive.

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500,000 Species

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# WELCOME

On behalf of the organising committee and conference hosts, I'd like to welcome you all to Adelaide, and for some of our international guests extend a first warm welcome to Australia. We are very excited to host this important meeting, and the expertise and passion of the many contributors have made it clear it will be a tremendous meeting. We have had an unprecedented level of interest in the meeting, and will have over 420 delegates from nearly 60 countries attending. The program is a stimulating mix of presentations and workshops focussing on the latest developments in the field of DNA barcoding, such as the use of next generation sequencing, innovative statistical analysis, novel databasing frameworks and the use of environmental samples. In addition we will see the reporting of major barcoding initiatives, from across the tree of life, including whole biotas, as well as a range of barcoding applications that improve invasive species tracking, identification of pests and diseases, securing trade routes, and are revolutionising environmental monitoring. I hope to meet you while you are in Adelaide and I am sure you will enjoy the conference and our city.



Andrew Lowe  
Conference Chair

Dear Conference Participants,

On behalf of the Consortium for the Barcode of Life (CBOL), it's a pleasure to welcome you to the Fourth International Barcode of Life Conference, the first in the southern hemisphere! This is by far the largest barcode conference ever held, with more than 400 participants from 57 countries and more than 500 abstracts submitted. The conference week is packed with interesting sessions thanks to presenters from around the world and the hard work of the Program Committee, listed below. The excellent facilities and superb social program have been arranged by the Local Organizing Committee, chaired by Andy Lowe and co-chaired by Andy Austin.



Scott E. Miller  
CBOL Chair

CBOL's sincere thanks go out to all the committee members, support staff, and to the sponsors, exhibitors and contributors whose logos and messages are distributed throughout this program booklet.

Finally, CBOL thanks you all for coming to Adelaide to exchange information and ideas. Your talent and enthusiasm are critical to the success and the ever-growing momentum of the DNA barcoding movement.

Have a great conference!



David Schindel  
Conference Co-Chair

# COMMITTEES

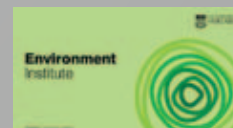
## Local Organizing Committee

Andy Lowe, CHAIR, UNIVERSITY OF ADELAIDE  
Andy Austin, CO-CHAIR, UNIVERSITY OF ADELAIDE  
Stefan Caddy-Retalic, UNIVERSITY OF ADELAIDE  
Aria Colton, UNIVERSITY OF ADELAIDE  
Steve Cooper, SOUTH AUSTRALIAN MUSEUM  
Hugh Cross, STATE HERBARIUM OF SOUTH AUSTRALIA  
Paul Finn, UNIVERSITY OF ADELAIDE  
Fred Gurgel, UNIVERSITY OF ADELAIDE  
Alison Jobling, UNIVERSITY OF ADELAIDE  
Adriana Russo, UNIVERSITY OF ADELAIDE  
Mark Stevens, SOUTH AUSTRALIAN MUSEUM

## Program Committee

David Schindel, CHAIR, CBOL  
George Amato, AMERICAN MUSEUM OF NATURAL HISTORY  
Andy Austin, UNIVERSITY OF ADELAIDE  
Pedro Crous, CBS FUNGAL BIODIVERSITY CENTRE  
Patricia Escalante, INSTITUTO DE BIOLOGIA UNAM  
Peter Freeman, INTERNATIONAL BARCODE OF LIFE PROJECT  
Peter Hollingsworth, ROYAL BOTANIC GARDEN  
Beatrice N. Khayota, NATIONAL MUSEUMS OF KENYA  
Andy Lowe, UNIVERSITY OF ADELAIDE

# CO-HOSTS



AUSTRALIAN CENTRE FOR  
EVOLUTIONARY BIOLOGY  
AND BIODIVERSITY



THE UNIVERSITY  
of ADELAIDE

CONSORTIUM FOR THE BARCODE OF LIFE

2

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CITY MAPS

SPONSORS BACK COVER



Daniel Masiga, ICIPE- AFRICAN INSECT SCIENCE FOR FOOD AND HEALTH  
Christopher Meyer, SMITHSONIAN INSTITUTION  
Scott Miller, SMITHSONIAN INSTITUTION  
Gerardo Salazar, INSTITUTO DE BIOLOGIA UNAM  
Neil Sarkar, UNIVERSITY OF VERMONT  
Kwang-Tsao Shao, ACADEMIA SINICA  
Pablo Tubaro, MUSEO ARGENTINO DE CIENCIAS NATURALES  
Michelle van der Bank, UNIVERSITY OF JOHANNESBURG

# GENERAL INFORMATION

## Registration times

The registration desk will be in Bonython Hall. Registration will be open from 14:00 until 18:00 on Sunday, 27 November, and from 8:00 until 18:00 for the remainder of the conference. Access to conference events and venues is only permitted with a valid badge; nametags must be worn at all times. People who have pre-registered for the preconference training events or for the conference should plan to pick up their conference materials before trying to enter their first meeting.

## Internet Access

The conference organizers have arranged for wireless internet access during sessions in all conference buildings (Elder Hall, Bonython Hall, the Napier building, Innova21 and Ligertwood Law Theater). Information on connecting to the wireless network will be provided in the registration packet.

## Session Schedules

The conference will begin promptly at 9:00 each morning and will end at 17:30 each day. 30 minute morning and afternoon coffee/tea breaks will be at 10:30 and 15:30. Lunch will be from 12:30 and continue until 14:00 daily. Coffee/tea breaks and lunch will be in the Innova21 Atrium during the pre-conference meetings and in Bonython Hall during the conference. A packed lunch will be provided to each registrant on Thursday at 12:30 at the start of free afternoon time.



## Thursday Tour Information

### ABORIGINAL CULTURAL TOUR

#### TOUR STARTS: 13:00

Meet at the back entrance of the Botanic Gardens (Friends Gate, Plane Tree Drive)

#### TOUR ENDS: 16:30

The tour will end at the Tandanya National Aboriginal Cultural Institute.

**NOTES:** Dress appropriately for the weather and an active walk. Suggested items to bring include a sun hat, sunscreen, walking shoes, and raincoat/umbrella. Food is not provided during this tour.

### LIFE IS A CABERNET WINE TOUR

#### TOUR STARTS: 13:00

Meet at Bonython Hall for tour departure.

#### TOUR ENDS: 17:30

Participants will be returned to their hotels.

**NOTES:** Dress appropriately for the weather. Money will be necessary to purchase any of the wine you've tasted. Food is provided during this tour.

### CLELAND WILDLIFE PARK TOUR

#### TOUR STARTS: 13:00

Meet at Bonython Hall for tour departure.

#### TOUR ENDS: 17:30

Participants will be returned to their hotels.

**NOTES:** Dress appropriately for the weather and wear comfortable shoes. Money will be necessary to purchase snacks and souvenirs. Food is not provided on this tour.

### ACCOMPANYING PERSONS

If you have purchased an extra ticket for an accompanying person, it will be included in your registration packet.



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Visit [www.ala.org.au](http://www.ala.org.au) for rich data on Australian species:

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- powerful mapping tools
- photos, literature, identification keys
- software for field data capture
- databases on specimens in collections.



## Information for Presenters

### SPEAKER READY ROOM, NAPIER 144

All presentations will be managed through a central networked filing system. All presenters must load their presentation files into this system at least **three hours** before their session begins. Technicians will be available to receive these files in the Speaker's Ready Room, Napier 144, during the following times:

- **27 NOV:** 14:00-16:00
- **28-30 NOV, 2 DEC:** 08:00-17:00
- **1, 3 DEC:** 08:00-12:30

All presentations will be projected from a Windows computer and must be in Powerpoint (.ppt and .pptx) format. Speakers can test their presentations in the Speaker's Room when PCs are not occupied by presenters who are uploading their files.

### RECORDING AND PRESENTATION

The conference organizers plan to make the following resources available online after the conference:

- PDF versions of Powerpoint presentations
- PDF versions of posters
- Audio recordings of plenary presentations, both as podcasts and linked to PowerPoint presentations.

As part of the abstract confirmation process, all presenters were asked for their permission to share a digital copy of their slide and/or poster presentation with the conference organizers. These presentations will be made available through Connect, the Barcode of Life network (<http://connect.barcodeoflife.net>) by the conclusion of the conference. Posting of presentations will be delayed if the presenter opted to submit a modified presentation without proprietary information for public sharing.

### POSTER PRESENTATIONS

Presenters may install their posters in Bonython Hall from 10:00 to 18:00 on Tuesday, 29 November. Posters must be affixed using only double-sided velcro strips which the organizers will provide. Posters must be removed no later than 10:30 on Saturday, 3 December. Any posters remaining at this time will be discarded.

### EXHIBITORS

Display booths will be ready for exhibitor set-up in Bonython Hall from 10:00 to 18:00 on Tuesday, 29 November. Display booth materials will need to be removed no later than 14:00 on Saturday, 3 December. Any materials remaining after this time will be discarded of and an extra clean-up fee will be charged to the associated exhibitor group.

## List of social events

### OPENING RECEPTION

**TUESDAY, 29 NOVEMBER**  
**ADELAIDE ZOO**  
**18:00-20:30**

The welcome reception will be hosted at the famous Adelaide Zoo, home to the only two giant pandas in the southern hemisphere. The zoo is within easy walking distance of the University of Adelaide. Volunteers will guide participants from the conference venue to the event site.

**RIAUS DEBATE AND RECEPTION**  
**WEDNESDAY, 30 NOVEMBER**  
**ELDER HALL, THE UNIVERSITY OF ADELAIDE**  
**18:00-18:45 PANEL DEBATE**  
**18:45-19:30 QUESTIONS FROM THE FLOOR**

A panel discussion hosted by the RIAus covering the topic of

**"Do we need DNA Barcoding for Conservation?"**

This discussion will involve leading experts from the barcoding and conservation field, including time for audience participation and questions at the end of the discussion.

### FRIDAY CLOSING RECEPTION

**FRIDAY, 2 DECEMBER**  
**SOUTH AUSTRALIA MUSEUM**  
**17:45-19:30**

A cocktail reception held inside the South Australian Museum will be an opportunity to continue discussions while viewing the spectacular exhibits.

## RIAus Debate: "Do we need DNA Barcoding for Conservation?"

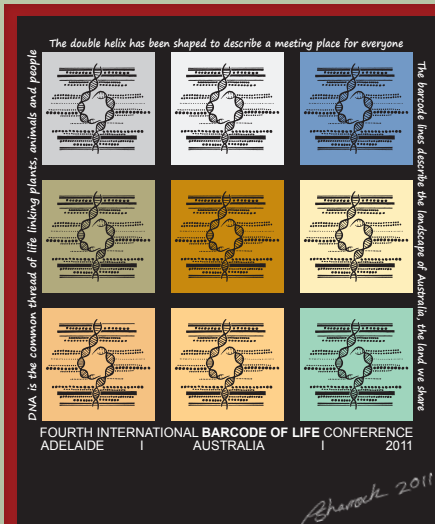
In this era when native habitats are disappearing at an even faster rate than the government budgets meant to preserve them, some tough choices are necessary to preserve what is left. The modern dilemma for conservation biology is to decide what can be saved, and what cannot. The key challenge therefore is to determine the most economical approach for making these decisions, in order to conserve the regions with the highest biodiversity. One approach to this dilemma is provided by DNA Barcoding, in which genetic signatures unique to each species are utilized to determine the regions with the highest biodiversity—measured in terms of the genetic diversity and distance between species in a given area. Though this requires costs for laboratory resources, with DNA barcoding this approach is streamlined for maximum efficiency, and standardised so that results can eventually be compared to any region in the world.

Some contend however, that DNA barcoding is not the best approach for conservation biology. They argue that this approach uses too many resources and there are other ways which, while not precise, provide a reasonable estimate with fewer costs with the same final result. In this context, the University of Adelaide, the Consortium for the Barcode of Life and RIAus present a debate between the two sides of this issue. Some of the leading biologists and policy makers in this field will state their views and discuss the relevant arguments for each side. Ultimately, they will strive to answer the questions of what we are saving, and how much do we need to know about what we are conserving?

### PANEL:

Paul Willis, MC  
Pete Hollingsworth, DNA BARCODING  
Michelle van der Bank, DNA BARCODING

Andrew Lowe, CONSERVATION SCIENCE  
Allan Holmes, CONSERVATION AND POLICY  
Karen James, PUBLIC ENGAGEMENT IN SCIENCE



I am an Indigenous artist of Eastern Arrernte descent. My Language group is Kuyani Arabunna/Arrernte. I am a multi skilled artist with a number of different mediums. I enjoy using line, texture, tone and shadows in my work. I have exhibited interstate and overseas. My last major solo exhibition was at Tandanya National Culture Institute.

I am also the first person recognized for carving ochre pigment in making sculptures. I taught myself this over a twelve year period in where I developed my own technology for carving ochre. I was also recognized by ABC for making these sculptures back in late 2005. I believe innovation, art and technology connects the traditional to the contemporary forms of art together.

Personally art is about understanding visual language and the visual language you use no matter what the form is. This is where art can have a real personal feel or touch in the experience of art. I believe everyone has a visual language, but artists pay more attention to it, than most others.



Peter Sharrock, Artist

# WEEK AT A GLANCE

## WEDNESDAY

### OPENING PLENARY, PRESENTED BY LIFE TECHNOLOGIES

#### WELCOME AND KEYNOTE ADDRESS

- 9:00 Welcome from Andrew Lowe,  
Conference Chair and Local Officials
- 9:45 Welcome and Report from  
Scott E. Miller, CBOL Chair
- 10:00 Keynote Address: Mike Wilkinson  
THINKING BEYOND THE BARCODE. HOW BEST TO  
EXPLOIT THE EMERGING BARCODE RESOURCES?
- 10:30 *Coffee/Tea Break*

### BARCODING APPLICATIONS: TEN-MINUTE 'LIGHTNING' PRESENTATIONS

- 11:00 Rebecca Johnson  
CAN DNA BARCODING HELP STOP THE BUDGIE  
SMUGGLERS? THE FUTURE OF WILDLIFE  
FORENSICS AS A CRIME FIGHTING TOOL
- 11:10 Johannes Groenewald  
IDENTIFYING QUARANTINE ORGANISMS WITH DNA  
BARCODES – QBOL AND ITS CONTRIBUTION TO  
QBANK
- 11:20 Laura Boykin  
SPECIES DELIMITATION AND GLOBAL BIOSECURITY
- 11:30 Damon Little  
COMMERCIAL TEAS HIGHLIGHT PLANT DNA  
BARCODE IDENTIFICATION SUCCESSES AND  
OBSTACLES
- 11:40 Discussion

### SCIENTIFIC FINDINGS A

- 11:50 Nicolas Hubert  
CRYPTIC DIVERSITY IN INDO-PACIFIC CORAL REEF  
FISHES REVEALED BY DNA-BARCODING PROVIDES  
NEW SUPPORT TO THE CENTRE-OF-OVERLAP  
HYPOTHESIS
- 12:10 Bruce Deagle  
FURTHER FACTS FROM FAECES: DIETARY  
DNA BARCODING USING HIGH THROUGHPUT  
SEQUENCING

### 12:30 Lunch in Poster/Exhibit Area SIDE MEETINGS

- 13:00 Barcode Applications Forum
- 13:00 Geneious Presentation
- 13:00 LifeTech Office Hours

### POSTER SESSION

- 14:00 Visit posters and exhibits, Bonython Hall
- 15:30 *Coffee/tea break*

### PLENARY SESSION 2

#### SCIENTIFIC FINDINGS B

- 16:00 Nicolas Puillandre  
LARGE SCALE SPECIES DELIMITATION METHOD  
FOR HYPERDIVERSE GROUP
- 16:20 Ilene Mizrahi  
BARCODE SEQUENCE DATAFLOW INTO GENBANK

### NEW APPROACHES TO GENERATING REFERENCE BARCODES

- 16:40 John La Salle  
THE "BARCODE BLITZ": ACCELERATING THE  
TARGETED CAPTURE OF BARCODE DATA
- 17:00 Ralph Imondi  
BARCODING THE KELP FORESTS OF CALIFORNIA'S  
CHANNEL ISLANDS NATIONAL PARK: SERVING THE  
COMPOUND INTERESTS OF MARINE RESEARCH,  
RESOURCE MANAGEMENT, AND RESEARCH-BASED  
SCIENCE EDUCATION

## THURSDAY

### TAXON PLENARY SESSIONS

#### PLANTS

- 9:00 Andrew Lowe  
THE APPLICATION OF DNA BARCODING AND INTRA-  
SPECIFIC GENETIC VARIATION TO TIMBER SOURCE  
VERIFICATION AND TRACKING
- 9:30 De Zhu Li  
DNA BARCODING OF 6000 SPECIES OF PLANTS IN  
CHINA
- 10:00 Hannah McPherson  
DO NEXT GENERATION SEQUENCING APPROACHES  
PROVIDE THE ANSWER FOR DNA BARCODING OF  
PLANTS?
- 11:00 Peter Holingsworth  
DEVELOPING STRATEGIES TO IMPROVE THE  
AMPLIFICATION AND SEQUENCING OF THE MATK  
GENE REGION FOR LAND PLANT BARCODING
- 11:30 Claudio Varotto  
TOWARDS THE BARCODING OF THE WHOLE  
VASCULAR FLORA OF TRENTINO (ITALY)
- 12:00 Natasha de Vere  
BARCODE OF WALES / CODBAR CYMRU: A COMPLETE  
DNA BARCODE DATASET OF A NATION'S NATIVE  
FLOWER PLANTS: CREATION, APPLICATIONS AND  
PUBLIC ENGAGEMENT

### INVERTEBRATES, PRESENTED BY HELIX MOLECULAR SOLUTIONS

- 9:00 Axel Hausmann  
HOW TO ASSESS THE 'MEGABIODIVERSITY' OF  
INVERTEBRATES: 55% OF THE WORLD'S GEOMETRID  
MOTH SPECIES ARE DNA BARCODES
- 9:20 Claudia Bertrand  
DECIPHERING BARCODE SPLITS IN  
MORPHOLOGICALLY CRYPTIC SPECIES OF TROPICAL  
LEPIDOPTERA THROUGH ALTERNATIVE LOCI AND  
NEXT-GENERATION SEQUENCING APPROACHES
- 9:40 Sandra Damm  
CHARACTER-BASED DNA BARCODING ALLOWS  
FOR INTEGRATION OF GEOGRAPHY, ECOLOGY AND  
MORPHOLOGY: THE DISCOVERY OF A CRYPTIC  
SPECIES COMPLEX IN DRAGONFLIES USING CAOS
- 10:00 Sally Adamowicz  
DNA BARCODES REVEAL INCREDIBLE DIPTERAN  
DIVERSITY AT A SITE IN CANADA'S ARCTIC
- 10:20 Discussion
- 11:00 Sara Pinzon-Navarro  
BARCODES UNRAVEL EVOLUTIONARY AND  
ECOLOGICAL PATTERNS OF SEED-FEEDING INSECTS
- 11:20 Michael Raupach  
BIODIVERSITY ASSESSMENT OF THE NORTH  
SEA FAUNA USING DNA BARCODES AND OTHER  
MOLECULAR METHODS
- 11:40 Viatcheslav Ivanenko  
ON THE DIVERSITY AND HOST SPECIFICITY OF  
CRUSTACEAN COPEPODS ASSOCIATED WITH STONY  
CORALS (CNIDARIA: ANTHOZOA: SCLERACTINIA) OF  
THE INDO-PACIFIC CORAL REEFS
- 12:00 Michelle Guzik  
GENETIC DIVERGENCES AND SPECIES BOUNDARIES  
IN SUBTERRANEAN INVERTEBRATES 'DOWN UNDER'
- 12:20 Discussion

#### VERTEBRATES

- 9:00 Jan Lifjeld  
DNA BARCODING OF AVIAN SUBSPECIES: A STUDY OF  
ISLAND ENDEMICS IN MACARONESIA
- 9:20 Alta Kadarusman  
EXTENSIVE CRYPTIC DIVERSITY IN INDO-  
AUSTRALIAN RAINBOWFISHES REVEALED BY DNA  
BARCODING
- 9:40 Ernst Swartz  
THE UTILITY OF BARCODING IN DOCUMENTING FISH  
DIVERSITY IN A POORLY EXPLORED AFRICAN RIVER  
SYSTEM
- 10:00 Dirk Steinke  
MARINE FISH EGGS AND LARVAE FROM THE EAST  
COAST OF SOUTH AFRICA
- 10:20 Discussion
- 11:00 Martha Valdez-Moreno  
LARVAE, EGGS AND GUT CONTENTS  
IDENTIFICATION...THREE STUDIES OF THE BARCODE  
APPLICATIONS ON MEXICAN FISH

#### ALGAE, PROTISTS, FUNGI

- 9:00 Gary Saunders  
ALGA—IBOL'S ALGAL LIFE GLOBAL AUDIT: MUDDLED  
MORPHOLOGIES & MOLECULAR MAYHEM IN THE  
TOPSY-TURVY WORLD OF ALGAL FLORISTICS
- 9:20 Pieter Vanormelingen  
(PSEUDO)CRYPTIC DIVERSITY AND BARCODING IN  
DIATOMS
- 9:40 Hugh Cross  
TALES FROM THE CRYPTOGAMS: FUNGAL DNA FROM  
MUSEUM COLLECTIONS
- 10:00 Matteo Garbelotto  
APPLICATIONS OF INTENSIVE DNA BARCODING  
PROJECTS FOR ADDRESSING GAPS IN FUNGAL  
BIODIVERSITY KNOWLEDGE
- 10:20 Marieka Gryzenhout  
BARCODING CAN PROMOTE MYCOLOGY IN AFRICA
- 11:00 Alain Franc  
R-SYST FUNGI : A FRENCH CONSORTIUM  
FOR FUNGAL BARCODING AND TAXONOMIC  
IDENTIFICATION
- 11:20 Weiland Meyer  
UPDATE ON DNA BARCODING OF HUMAN  
PATHOGENIC FUNGI
- 11:40 Keith Seifert  
IM-BOL: THE INDOOR MYCOTA BARCODE OF LIFE

12:30 *Packed lunches provided*

### AFTERNOON

Free time for posters, tours, and individual sight-seeing

# WEEK AT A GLANCE

## FRIDAY

### TAXONOMIC SESSIONS A

9:00-12:30

ALL BIRDS BARCODING INITIATIVE  
BARCODING FISH  
BARCODING FUNGI  
BARCODING INSECTS  
BARCODING MACROALGAE  
BARCODING PROTISTS  
BARCODING VERTEBRATES OTHER  
THAN FISH AND BIRDS

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12:30 *Lunch in the Poster/Exhibit area*

#### SIDE MEETINGS

13:00 BOLD Clinic  
13:00 Geneious Clinic  
13:00 LifeTech Presentation

### TAXONOMIC SESSIONS B

14:00-17:30

BARCODING FISH  
BARCODING FUNGI  
BARCODING GRASSES / BARCODING TREES,  
**PRESENTED BY DOUBLEHELIX**  
BARCODING INSECTS

### THEMATIC SESSIONS A

14:00-17:30

BARCODING INVERTEBRATES FOR  
ENVIRONMENTAL MONITORING AND  
ASSESSMENT OF AQUATIC HABITATS,  
**PRESENTED BY DENR**  
EDUCATION AND ENGAGEMENT  
BARCODING BIOTAS,  
**PRESENTED BY ALA**  
DATA ANALYSIS METHODS  
MARINE BARCODING,  
**PRESENTED BY JRS**  
RECOVERING DNA BARCODES FROM  
DEGRADED GENETIC MATERIAL IN  
NATURAL HISTORY COLLECTIONS

## SATURDAY

### THEMATIC SESSIONS B

9:00-12:30

BARCODING ENVIRONMENTAL DNA,  
**PRESENTED BY TERN**  
ECOLOGICAL APPLICATIONS OF DNA  
BARCODES  
INFORMATICS OF BARCODE DATA AND  
BOLD MIRROR SITES  
NATIONAL NETWORKS  
PARASITES AND VECTORS  
POLAR LIFE  
ROLE OF BARCODING IN QUARANTINE  
APPLICATIONS AND REGULATIONS,  
**PRESENTED BY ABRIS**  
SOCIO-ECONOMIC ASPECTS OF  
BARCODING

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12:30 *Lunch in the Poster/Exhibit area*

#### SIDE MEETINGS

13:00 BOLD Clinic  
13:00 Geneious Clinic  
13:00 All-Africa Barcode Conference 2012

### CLOSING PLENARY

#### INNOVATIONS AND THE FUTURE OF BARCODING

14:00 Pierre Taberlet  
THE DNA METABARCODING APPROACH FOR ANALYZING  
ENVIRONMENTAL SAMPLES: HIGH THROUGHPUT PLANT  
AND ANIMAL IDENTIFICATION  
14:15 Xin Zhou  
TAXON DIVERSITY ANALYSIS FOR BULK INSECT  
SAMPLES USING THE ILLUMINA HI-SEQ PLATFORM  
14:30 Conrad Schoch  
AN OFFICIAL BARCODE FOR FUNGI  
14:50 Discussion

#### STATUS AND FUTURE OF MAJOR PROJECTS: TEN-MINUTE 'LIGHTNING' TALKS

15:00 Paul Hebert  
BARCODES, ORGANELLES, GENOMES, ORGANISMS  
15:20 Peter Hollingsworth  
DNA BARCODING OF LAND PLANTS  
15:30 Robert Hanner  
FISH-BOL 1.0  
15:40 Mark Stoeckle  
ALL BIRDS BARCODING INITIATIVE (ABBI): BUILDING AN  
ATLAS OF AVIAN MITOCHONDRIAL DNA DIVERSITY  
15:50 Discussion

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16:00 *Conference Adjourns*

## NOTES

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## Australian Biological Resources Study (ABRS)

*Providing taxonomic knowledge underpinning the Barcode of Life*

Accurate species names are critical to biodiversity research, conservation and biosecurity.

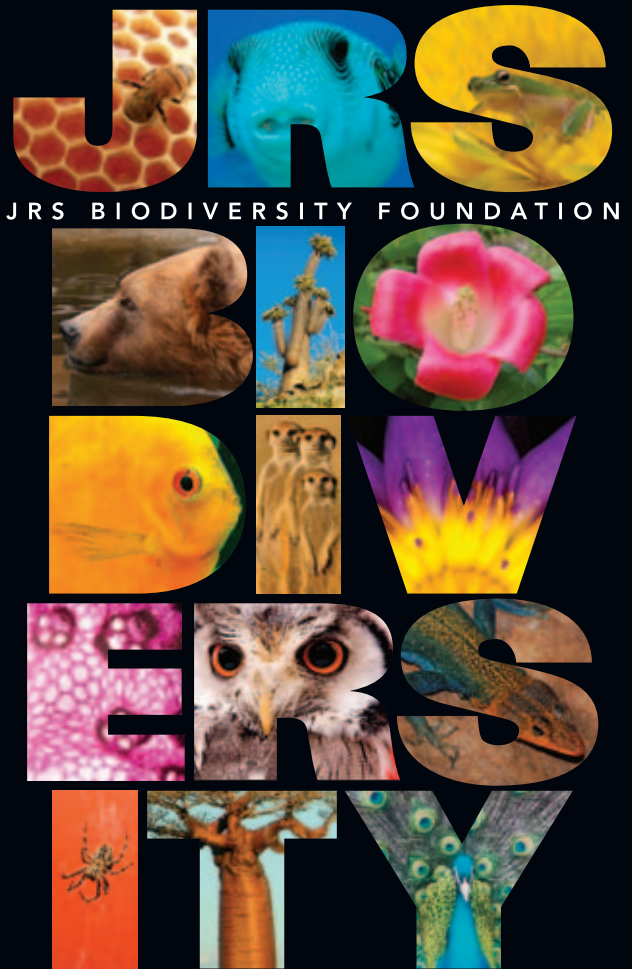
The ABRS:

- Provides authoritative national references for species names.
- Collates and disseminates information on Australia's Flora and Fauna.
- Funds research and training in taxonomy and systematics.

[www.environment.gov.au/biodiversity/abrs/](http://www.environment.gov.au/biodiversity/abrs/)



Australian Government  
Department of Sustainability, Environment,  
Water, Population and Communities



## DENR Science

*The Department for Environment and Natural Resources has the privilege and responsibility of working with the scientific community for the future of South Australia's environment. Our aim is to nurture a society that values, conserves and invests in its natural environment.*

In DENR, our scientific knowledge underpins our policies and informs our service delivery, ultimately providing better environmental outcomes.

It is only by collaborating with researchers and other agencies that we can tackle the environmental challenges of the future.

We're working to invest in science for the future; will you join us on this journey of discovery?

Our research interests and capabilities are summarised in our Science Prospectus and our priorities for future science and research in Science Directions 2010-2015.



Government of South Australia  
Department of Environment  
and Natural Resources



[www.environment.sa.gov.au/Knowledge\\_Bank/Science\\_research](http://www.environment.sa.gov.au/Knowledge_Bank/Science_research)



## Helix Molecular Solutions

Helix Molecular Solutions is a specialist genetics consultancy, based at the University of Western Australia. We conduct high standard nuclear and mitochondrial DNA studies of wildlife populations.

Contact us for assistance with:

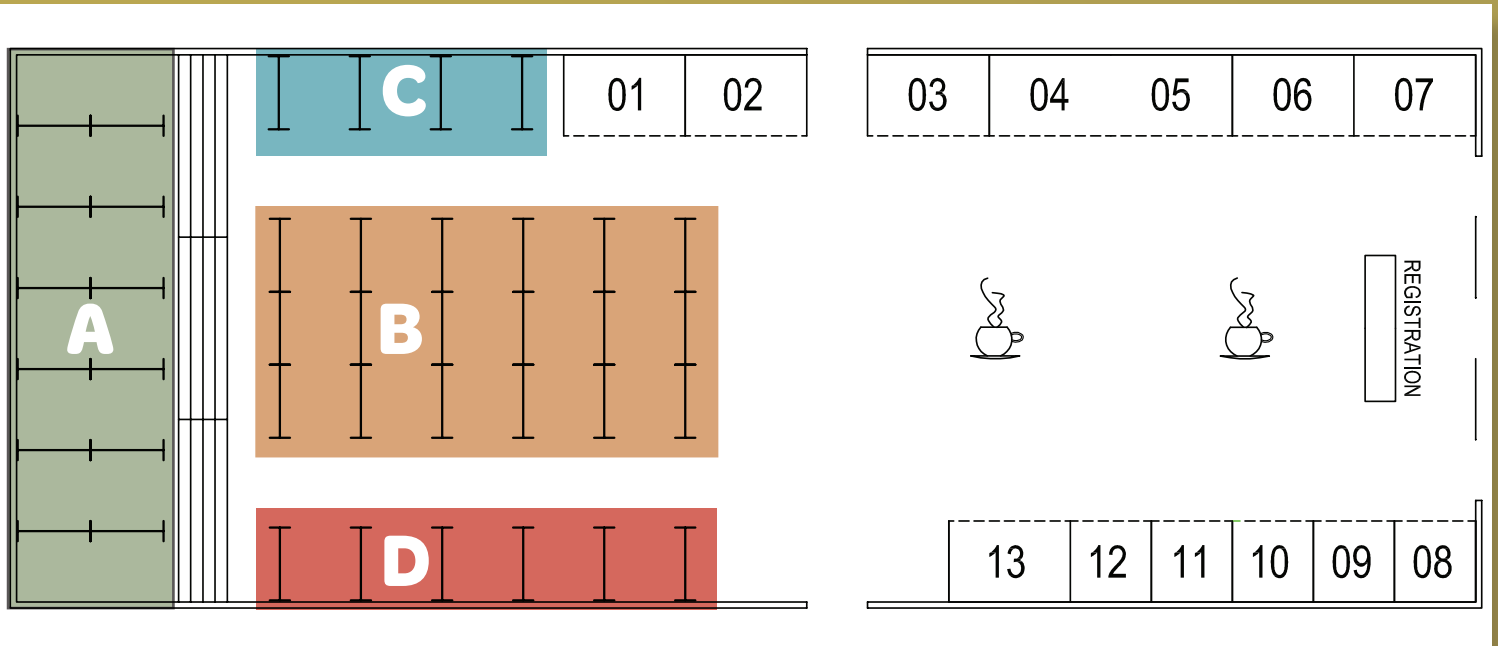
- Phylogenetic studies
- DNA barcoding
- Conservation genetics
- Wildlife forensics
- Molecular data analysis
- DNA sampling protocols

[helix@helixsolutions.com.au](mailto:helix@helixsolutions.com.au)  
[www.helixsolutions.com.au](http://www.helixsolutions.com.au)

0400 747 197



# BONYTHON HALL FLOORPLAN



## POSTERS

Posters will be displayed in Bonython Hall throughout the conference in the sections shown below, arranged alphabetically by presenter within each topic. Poster locations are specified in the Abstract Volume.

<i>Section A</i>
<b>FUNGI</b>
<b>PROTISTS</b>
<b>MACROALGAE</b>
<b>PLANTS</b>
<i>Section B</i>
<b>PLANTS</b>
<b>TREES</b>
<b>INVERTEBRATES</b>
<b>INSECTS</b>
<b>FISH</b>
<b>BIRDS</b>
<b>VERTEBRATES</b>
<b>CITES/HEALTH</b>
<b>NETWORKS AND INSTITUTIONS</b>
<i>Section C</i>
<b>BIOTAS</b>
<b>POLAR</b>
<b>MARINE</b>
<i>Section D</i>
<b>FRESHWATER BIOSURVEILLANCE</b>
<b>ECOLOGY</b>
<b>DATA ANALYSIS METHODS</b>
<b>INFORMATICS</b>
<b>ENVIRONMENTAL DNA</b>
<b>QUARANTINE</b>

## EXHIBITOR BOOTHS

- |  |  |
|--|--|
| 1 Australian Biological Resources Study (ABRS) | 8 Australian Genome Research Facility (AGRF)                             |
| 2 Atlas of Living Australia (ALA)              | 9 Diagnostic Technology  |
| 3 Life Technologies                            | 10 Department of Environment & Natural Resources, South Australia (DENR) |
| 4-5 BOLD Systems                               | 11 Helix Molecular Solutions   |
| 6 International Barcode of Life (iBOL)         | 12 Barcode of Life Data Portal   |
| 7 Subterranean Ecology                         | 13 Illumina  |

# visage

audio visual excellence

Visage is a premium quality, South Australian owned audiovisual company providing services for conferences, exhibitions, gala and special events.

As a customer focused, boutique supplier, we are recognized as one of the most creative and versatile in our industry, providing truly uncompromising service delivery standards.

We are reknown for understanding our clients' vision and delivering cost effective, relevant solutions, with our staff always focused on your requirements and exceeding expectations.

Our services include; audio, vision, lighting, staging, multiroom technical management, content creation, theming, exhibition AV, video conferencing and webstreaming.

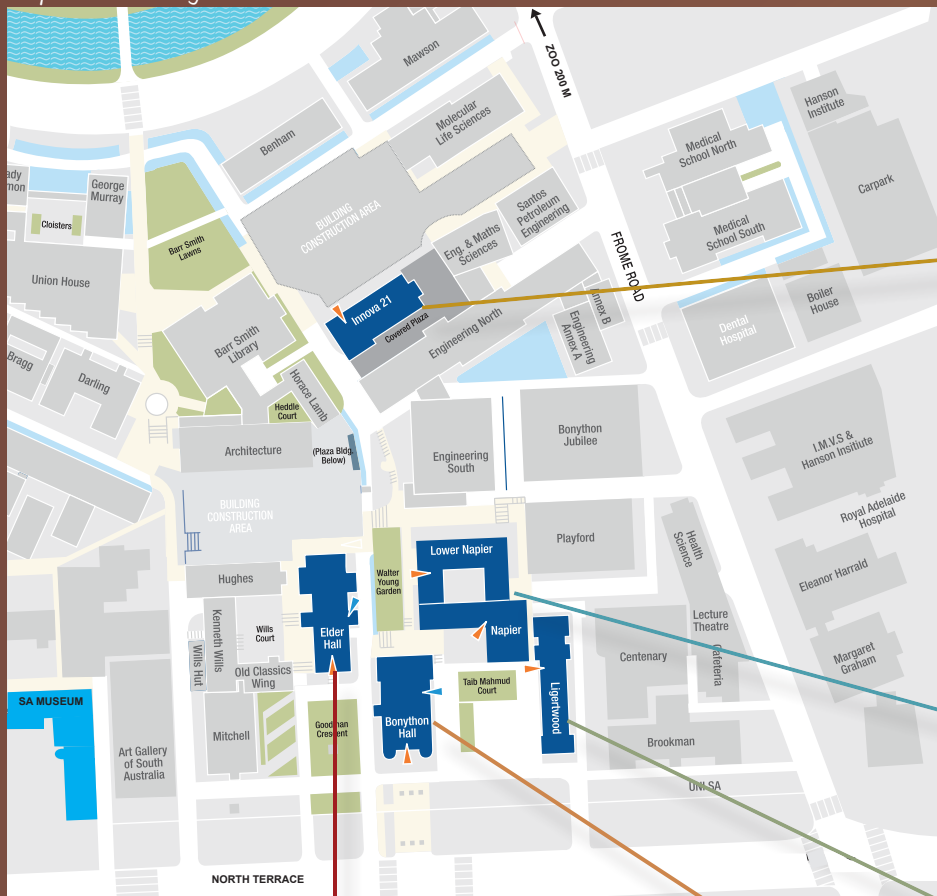
No matter the scope of your event, our experienced design staff can recommend relevant, cost effective equipment for a basic meeting or conference, or vibrant concepts for a Gala dinner, product launch or other event.

Iconic structures and spaces with interesting shapes and textures, are another specialty – please visit our website to view examples of some of our previous creations.

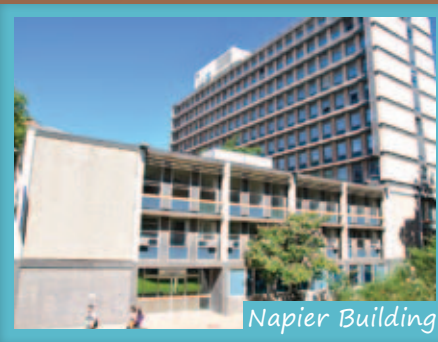
Visage Audio Visual will help you portray your message, giving your guests and delegates a truly memorable experience.

[www.visageaudiovisual.com](http://www.visageaudiovisual.com)

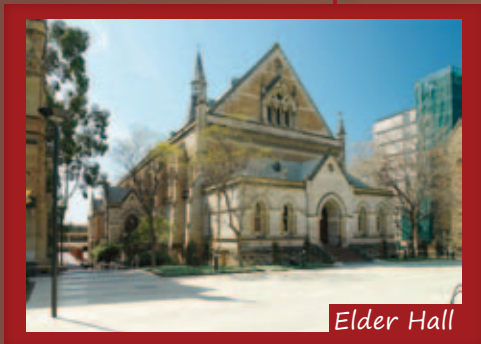
## Map 1. University of Adelaide



Innova21



Napier Building



Elder Hall



Bonython Hall



Ligertwood Law Theater

### ELDER HALL

Stately Elder Hall will host the opening and closing plenary sessions on Wednesday and Saturday.

### BONYTHON HALL

The hub of the conference, Bonython Hall will contain the exhibitor booths, poster display area, as well as the catering during morning and afternoon breaks, as well as lunch.

### INNOVA21

Innovative design highlights the next generation of sustainable structures. Session rooms can be found on the Basement floor.

### THE NAPIER BUILDING

With its distinctive 1960's architecture, Napier will host both taxon plenary and parallel technical sessions. Rooms can be found on the Lower Ground, Ground, First and Second floors.

### LIGERTWOOD LAW THEATER

Right next to Bonython Hall, the Ligertwood Law lecture theater will host a taxon plenary session on the first floor.

## MAP LEGENDS AND INFORMATION

### Map 1: University of Adelaide

Conference buildings are highlighted in Blue, with their entrances indicated by orange arrows.

### Map 2: Connector Bus Route

The free Adelaide Connector Bus connects the City Business District (CBD) with the northern part of the city, and will be particularly helpful for delegates rooming at St. Marks.

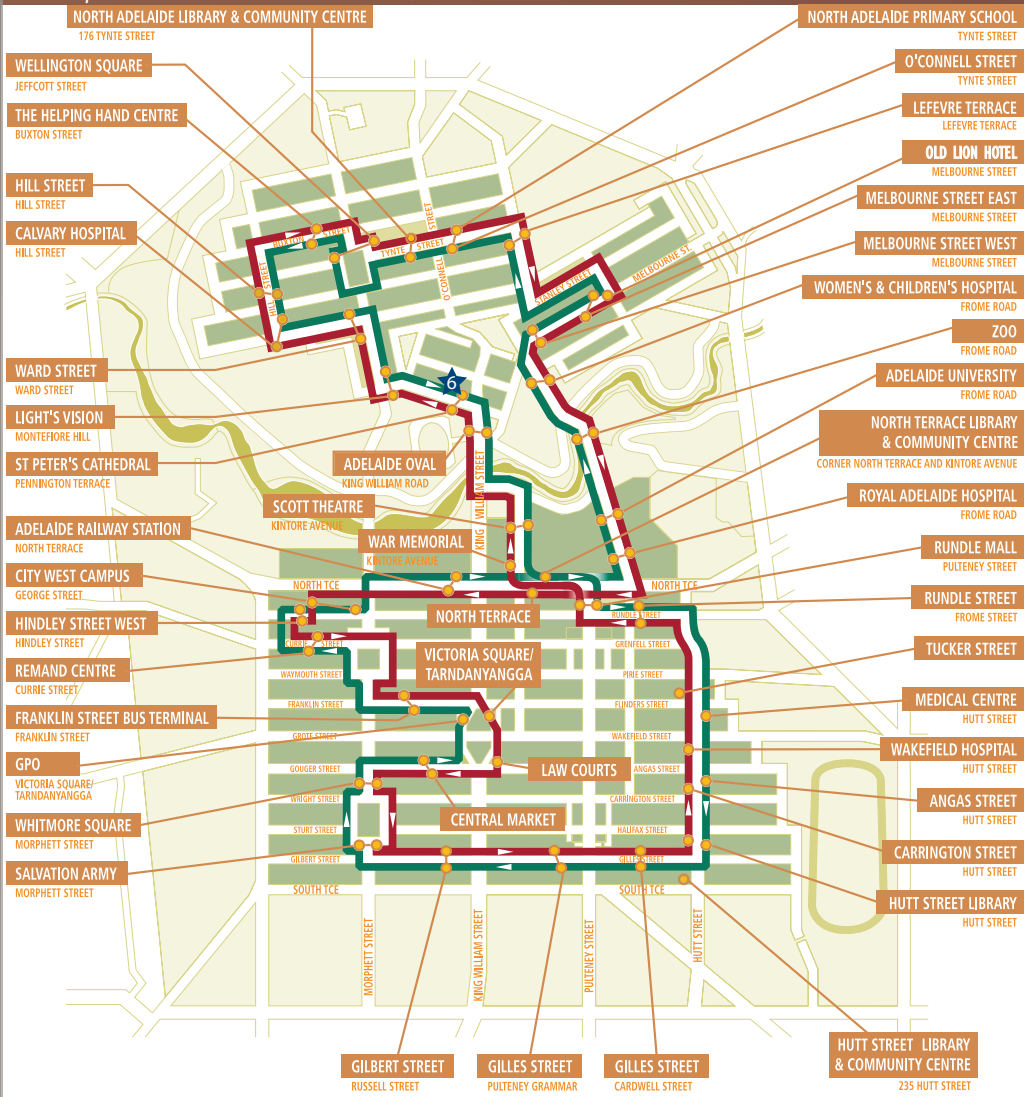
### Map 3: Bee Line and City Loop routes

City Loop (99C) and 'Bee' Line (99B) buses are free bus lines connecting the major conference venues and hotels.

### Conference Locations

Connector	99C
1 Hotel Grand Chancellor on Hindley	Adelaide Railway Station 23
2 Oaks Embassy	Adelaide Railway Station 23
3 Oaks Horizon	Adelaide Railway Station 23
4 Oaks Precinct	Remand Centre 4
5 Sebel Playford	Adelaide Railway Station 23
6 St. Mark's College	St. Peter's Cathedral
University of Adelaide	Rundle Mall 9

Map 2. Adelaide CBD and north city, with Red and Green Connector routes



Free Travel Services in Adelaide

**ADELAIDE CONNECTOR BUS**

**SERVICE:** Hourly  
The Adelaide Connector Bus makes an hourly circuit that connects key points in North Adelaide and the City center. The St. Peter's Cathedral stop is conveniently located near St. Mark's, and the North Terrace Red Route and Adelaide University Green Route stops provide easy access to the University of Adelaide from either direction.

**99B "BEE LINE" BUS**

**SERVICE:** Mon-Fri ever 5 minutes  
Sat-Sun every 15 minutes  
The free Bee Line provides speedy access to several conference hotels, key attractions like the Rundle Mall, and is convenient to both the Railway Station and Glenelg Tram stations. Please note the Bee Line runs in a unidirectional clockwise manner.

**99C "CITY LOOP" BUS**

**SERVICE:** Mon-Fri every 15 minutes  
Sat-Sun every 30 minutes  
The free City Loop bus provides easy access to key points of interest in the city center. There are stops convenient to most conference hotels and the University of Adelaide, as well as the famous Rundle Mall and connections to the Railway Station and Glenelg Tram. Unlike the Bee Line, the City Loop operates in both directions.

**GLENELG TRAM**

**SERVICE:** 10 minutes during the day  
20 minutes at night  
The Glenelg Tram provides seven free stops in the city center, from South Terrace to Entertainment Centre. It does provide convenient access from hotels on North Terrace to Rundle Mall and Victoria Square, and is also the best way to travel outside the city to Glenelg and the nearest beach.

Map 3. City Loop (green) and 'Bee' Line (blue) bus routes through the Adelaide Central Business District (CBD).



**CITY LOOP 99C**

- 1 Victoria Square (Trams)
- 2 Central Market (China Town)
- 3 Morphett Street (Family and Community Services)
- 4 Hindley Street (Light Square)
- 5 Hindley Street West (Motels, Cafés, Marcellina's)
- 6 The Terraces West
- 7 Arts Centre (City SK8 Park)
- 8 Railway Station (Casino, Hyatt, Festival Centre, Adelaide Convention Centre)
- 9 State Library / Museum / Art Gallery
- 10 Botanic Gardens (Royal Adelaide Hospital, Wine Centre)
- 11 Parklands (Rundle Street)
- 12 Tandanya (Grenfell Street)
- 13 Hindmarsh Square (Pulteney Street)
- 14 St Pauls (Function Centre)
- 15 Fire Station (Wakefield Street)
- 16 Victoria Square (Trams)
- 17 Her Majesty's Theatre (Grote Street)
- 18 Central Bus Station (Backpackers Hostel)
- 19 Hindley Street (Rockford Adelaide)
- 20 Hindley Street West (Motels, Cafés, Marcellina's)
- 21 The Terraces (Newmarket Hotel, Day Surgery)
- 22 University West (George Street)
- 23 Uni of S.A. - City West
- 24 EDS Building (Registration and Licensing)
- 25 Roma Mitchell House (Bank Street)
- 26 Government House (Myer)
- 27 Central Shopping (David Jones)
- 28 Frome Street (Royal Adelaide Hospital)
- 29 Rundle Street (East End, Cafés, Pubs)
- 30 East End
- 31 Hindmarsh Square (Wallis Academy Cinemas)
- 32 Pulteney Street
- 33 Fire Station (Wakefield Street)
- 34 Gawler Place

**LEGEND**

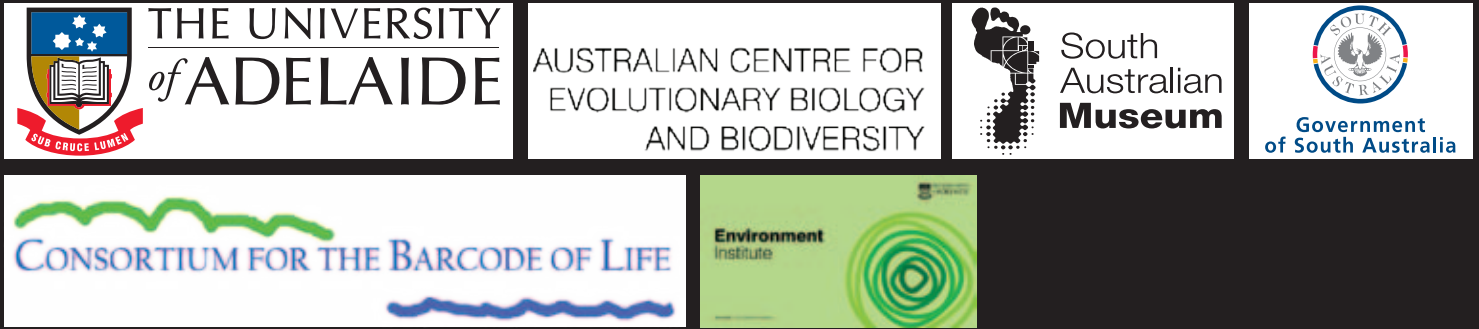
- Free City Loop bus route
- Free Bee Line bus route
- Glenelg Tramway
- JetBus Bus Route
- Cafe/Restaurant Precinct
- Central bus station (Intra and Interstate travel)
- Adelaide Free bus stop
- JetBus bus stops
- All Adelaide FREE buses are fully accessible and feature low floors and ramps

Mon-Thurs	8 am - 6 pm	Runs every 15 minutes
Friday	8 am - 9.15 pm	15 minutes
Saturday	8.15 am - 5.15 pm	30 minutes
Sunday	10 am - 5.15 pm	30 minutes

Mon-Thurs	7.40 am - 6 pm	Runs every 5 minutes
Friday	7.40 am - 9.20 pm	5 minutes
Saturday	8.27 am - 10.30 am	17 minutes
	10.30 am - 5.35 pm	15 minutes
Sunday	10 am - 5.30 pm	15 minutes

**INFOCENTRE**  
Open Monday to Friday  
from 8 am - 6 pm,  
Saturday 9 am - 5 pm  
and Sunday 11 am - 4 pm

# CO-HOSTS



# SPONSORS



# EXHIBITORS



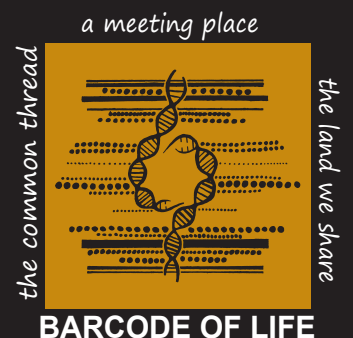
# BOLD SYSTEMS

# OTHER CONTRIBUTORS



## ARTWORK DESCRIPTION:

DNA is the common thread of life linking plants, animals and people. The double helix has been shaped to describe a meeting place for everyone. The barcode lines describe the landscape of Australia, the land we share.



BARCODE OF LIFE