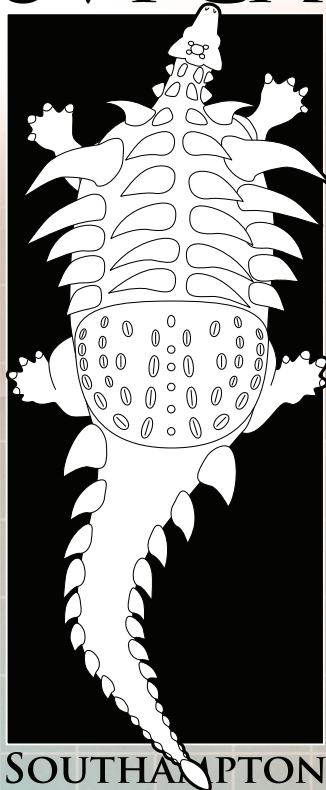


# SVPCA



SOUTHAMPTON

# 2015

## 63RD SYMPOSIUM ON VERTEBRATE PALAEOLOGY AND COMPARATIVE ANATOMY

## 24TH SYMPOSIUM OF PALAEOLOGICAL PREPARATION AND CONSERVATION WITH THE GEOLOGICAL CURATORS' GROUP

SOUTHAMPTON  
(OCEAN AND EARTH SCIENCES, NATIONAL  
OCEANOGRAPHY CENTRE):  
31ST AUGUST TO  
4TH SEPTEMBER 2015

### FINAL CIRCULAR AND SCHEDULE

The SVPCA and SPPC/GCG meetings are now less than a month away, and we hope you're all looking forward to it as much as we are in Southampton. This circular will provide, we hope, the rest of the information you will need for the conference. If you have any questions that aren't answered by this circular, then please contact the organisers via email: [southampton2015@svpca.org](mailto:southampton2015@svpca.org) or [gareth.dyke@soton.ac.uk](mailto:gareth.dyke@soton.ac.uk)

### REGISTRATION

Abstract submission is now closed, but registration for SPPC/GCG and SVPCA will remain open until **August 14 at 5 PM (BST)**. Due to NOC security reasons, we must enforce this deadline and will not accept any registrations after this. Delegates will not be permitted to arrive on the day without being registered in advance as we need to process security/conference badges and follow security procedures. This means that guests will not be permitted for any of the events **unless they have registered**.

### DOCK SECURITY AND ENTERING NOC

Because the National Oceanography Centre is inside an active port area and subject to strict security regulations, all delegates **must** wear their conference badges at all times (this is critical, especially when entering Dock Gate 4 and entering the NOC building itself).

# 4



The only access (either by car, bus or foot) is through Dock Gate 4 (see map below). When approaching dock security, you may be stopped by security guards at the Dock Gate. Inform them that you are heading to SPPC/GCG/SVPCA conference at the National Oceanography Centre. You may be asked for some form of ID, so we recommend carrying identification at all times. If possible, avoid wearing hats and/or sunglasses as they may ask you to remove them to check your ID. We will be informing security of the conference, and will also provide them with a delegate list in case they want to check people against the list. If further problems occur, call Gareth Dyke (+44 7837 963628), Liz Martin-Silverstone (+44 7845 547867) or Jessica Lawrence Wujek (+44 0745 4911626).

Once you have entered the Dock Gate, you will take the **second left** (go straight -through the roundabout, then take the next left), taking you over a train track. There will be signs for the National Oceanography Centre main entrance. Take the first right into the NOC parking lot. Enter the revolving doors, and head straight up the stairs to the top (4<sup>th</sup> floor) where you will see the registration desk. We will have signs posted and volunteers around to help if you get lost.

### WHERE IS THE NOC?

Directions to NOC Southampton can be accessed via this link: <http://noc.ac.uk/about-us/maps-directions/southampton-centre> (for further detailed information, see below)

### WHERE CAN I PARK?

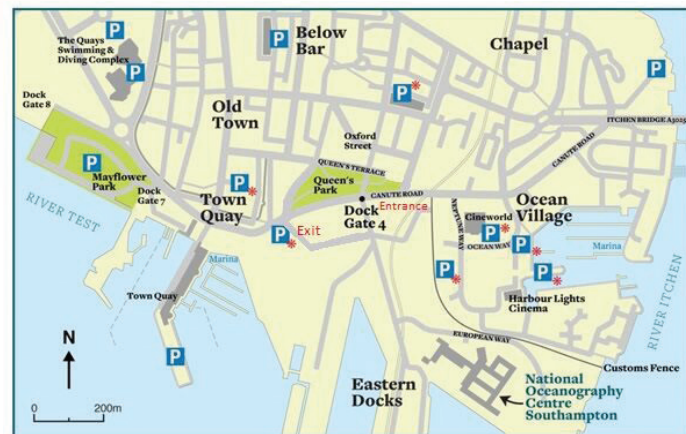
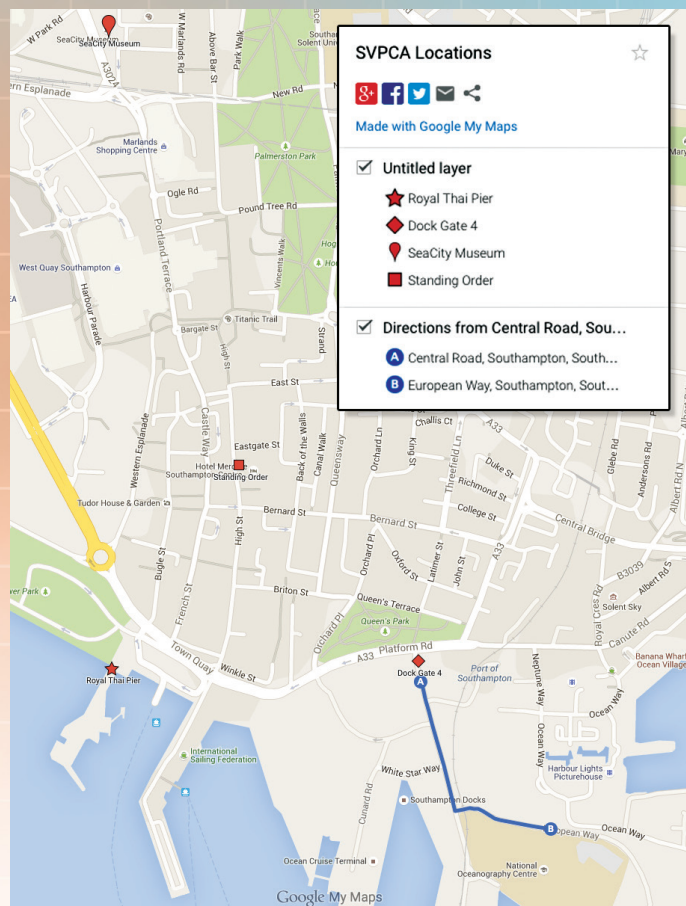
Very limited remaining parking spaces are available at the NOC for SPPC/SVPCA (for day times only – no overnight parking is possible). If you would like to reserve one of the few remaining spaces, please email Gareth Dyke ([gareth.dyke@soton.ac.uk](mailto:gareth.dyke@soton.ac.uk)) ASAP.

Our recommended alternative parking option close to the NOC (2-5 minutes walking) is at Ocean Village: <http://www.oceanvillagesouthampton.com/visit/getting-here/> Parking here is just £1 per hour.

NB: Throughout Southampton on street meter-paid parking is available (you must pay 0800-1800 with an additional over-night charge applicable).

### OTHER IMPORTANT INFORMATION

There are a number of restaurants, cafés, pubs, and shops nearby for lunch, whatever you fancy. We recommend going to Ocean Village (Admiral Sir Lucius Curtis Wetherspoons pub, Pitcher and Piano, Maritimo Lounge, and more) or Oxford Street (Chimi Changa, Casa Brazil, Cargo Lounge, White Star Inn, etc.) within a 10-15 minute walk from NOC. Slightly further away is High Street, where there is a Co-op, and Tesco for shops, and more cafés and restaurants. The Standing Order (Wetherspoons Pub) on High Street is a large pub that has been designated as our main evening point as it will accommodate a number of people, especially for Tuesday, Sept. 1, a free night.



The only pedestrian access to NOCS is through Dock Gate 4 \* Approx 10-15 mins walk to NOCS

Central Southampton map (<http://www.discoversouthampton.co.uk/visit>)

Food and drink (<http://www.discoversouthampton.co.uk/visit/food-drink>)

We've got some great material already for the auction including two brand new books from Siri Scientific Press, lots of other books, palaeoart, clothing, and more. Of course, other material for the auction are much appreciated. If you have a donation, or wish to discuss making a donation to this event (to raise money for the Jones-Fenleigh Fund) then please email the auction co-ordinator Liz Martin ([e.g.martin@soton.ac.uk](mailto:e.g.martin@soton.ac.uk))

For the first time, SVPCA will be joined by Palaeocast for a few days. Talks will not be live streamed, but Palaeocast will be interviewing delegates and presenters on their research. If you are interested in taking part, look for Palaeocast (particularly Dave Marshall) during the conference. It's a great way to feature research being done and talk about your work.

SVPCA 2015 encourages social media use throughout the conference. We are adopting the policy set forth by SVP, whereby speakers must inform the audience if they **do not** want their talks to be shared on social media (i.e. live tweeting). We encourage delegates who are concerned about this to contact us and we can advise on the topic. We would like to request that attendees should do this respectfully: no photographs of slides, or posters without permission please, and please do not post details of an entire talk that has not been published yet.

## POSTERS AND TALKS

Delegates should bring their talks on a memory stick or something similar. In the break before their time slot, they can check-in and deposit their talks in the seminar room next door to the lecture theatre.

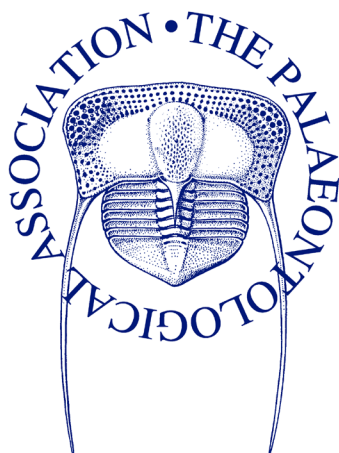
Space is available for the constant display of posters throughout SVPCA (starting at the Welcome Reception). We prefer portrait A1 format, but any size/shape can be accommodated. Abstract submission for posters should be made via the booking site and SVPCA site in the normal way.

**Additional information between now and the conference will be posted on our twitter account (@sotonvertpalaeo, and #SVPCA2015), and the SVPCA 2015 Southampton Facebook page.: <https://www.facebook.com/events/953708917972975/>**

The SPPC/SVPCA organising committee would like to thank the Palaeontological Association ([www.palass.org](http://www.palass.org)), the Geological Curators Group ([www.geocurator.org](http://www.geocurator.org)), Siri Scientific Press ([www.siriscientificpress.co.uk](http://www.siriscientificpress.co.uk)) and Palaeocast ([www.palaeocast.com](http://www.palaeocast.com)) for their support of this conference.

# Looking forward to welcoming you to Southampton!

*The SPPC/SVPCA organising committee*





# MEETING SCHEDULE

## Monday 31<sup>st</sup> August

- 9:00-9:45 SPPC/GCG registration at NOC Security desk (4<sup>th</sup> floor)
- Session — SPPC*  
*Chair — Mark Young*
- 10:00-10:20 **Mark Graham**  
Fossils, Footprints & Fakes
- 10:20-10:40 **Emma Bernard**  
A brief history of the best collection of fossil fish in the world – probably...
- 10:40-11:00 **Jeff Liston *et al.***  
Leviathan Rising: A new collections curation initiative from the Star Pit dig
- 11:00-11:20 **Luke Hauser**  
Breaking bad...bone beds: processing the Downton Bone Bed
- 11:20-11:40 **Frank Osbæck**  
Preparation of a uniquely preserved turtle from the early Eocene Mo clay formation of northern Denmark
- 11:40-12:00 **Donald Henderson**  
Moulding dinosaur tracks on the banks of the St. Mary River in southwestern Alberta, Canada
- 12:00-14:00 *Lunch*
- 14:00-18:00 SPPC/GCG trip to Hampshire County Council collections, arriving back at NOC before the 18:00 Icebreaker Reception.
- 18:00-21:00 **Icebreaker Reception and Registration**  
National Oceanography Centre Seminar Room

## Tuesday 1<sup>st</sup> September

- 8:10-8:45 SVPCA registration at NOC Security desk (4<sup>th</sup> floor)
- 8:45-9:00 Welcome by Dr Gareth Dyke
- Session — Pterosaurs & Dinosaurs*  
*Chair — Manabu Sakamoto*
- 9:00-9:15 **Alexander Kellner *et al.***  
Comments on pterosaur reproduction based on recently found specimens from the Jurassic and Cretaceous of China
- 9:15-9:30 **Colin Palmer & Michael Habib**  
Giants of the air: how big could they be?
- 9:30-9:45 **David Unwin & D. Charles Deeming**  
New evidence for sexual dimorphism in the basal monofenestratan pterosaur *Darwinopterus*
- 9:45-10:00 **Darren Naish *et al.***  
Romania and the short-necked azhdarchids, flightless avialans and giant lizards of yore
- 10:00-10:15 **Cindy Howells *et al.***  
A new Early Jurassic theropod from Wales: geological and discovery context
- 10:15-10:30 **David Martill *et al.***  
The oldest Jurassic dinosaur: a basal neotheropod from the Hettangian of Great Britain
- 10:30-11:00 *Morning coffee break*

**Session — Dinosaurs**

*Chair* — David Martill

- 11:00-11:15 **Daniel Vidal *et al.***  
The specialized tail of *Spinophorosaurus nigerensis* (Sauropoda. Middle Jurassic) and the osteological limits on its range of motion
- 11:15-11:30 **Michael Taylor *et al.***  
Were the necks of *Apatosaurus* and *Brontosaurus* adapted for combat?
- 11:30-11:45 **Craig Fraser**  
The first comprehensive insight into the histology of the basal ornithopod, *Hypsilophodon foxii*, from the Isle of Wight
- 11:45-12:00 **Stuart Pond *et al.***  
A critical new *Polacanthus* specimen from the Wessex Formation of the Isle of Wight
- 12:00-12:15 **David Hone *et al.***  
Positive allometry in the growth of a ceratopsian frill indicates sexual selection
- 12:15-12:30 **Manabu Sakamoto *et al.***  
Dinosaurs in decline tens of millions of years prior to the K-Pg boundary
- 12:30-14:00 *Lunch*

**Session — Mummies & Birds**

*Chair* — Ursula Göhlich

- 14:00-14:15 **Diane Johnson *et al.***  
Fossils of Qau el-Kebir; an ancient Egyptian funerary fossil collection
- 14:15-14:30 **Niels Bonde**  
On some feathers of *Archaeopteryx lithographica* and their preservation
- 14:30-14:45 **Eric Buffetaut & Delphine Angst**  
Twenty years of *Gargantuavis philoinos*: a summing up on an enigmatic Late Cretaceous giant bird
- 14:45-15:00 **Vincent Beyrand *et al.***  
Endocast shape in birds linked with behaviour and flight ability
- 15:00-15:15 **Rachel Frigot**  
A geometric morphometric examination of form and function in the avian pelvis
- 15:15-15:45 *Afternoon coffee break*

**Session — Birds**

*Chair* — Eric Buffetaut

- 15:45-16:00 **Estelle Bourdon *et al.***  
An exquisitely preserved stem roller (Aves: Coracii) from the Early Eocene Fur Formation of Denmark
- 16:00-16:15 **Ursula Göhlich *et al.***  
The penguin with an Albatross-like bill: anatomy of *Spheniscus urbinai* (Aves, Spheniscidae) from the Mio-Pliocene Pisco Formation in Peru
- 16:15-16:30 **Nicholas Chan**  
Complex evolution of avian leg bones with loss of flight
- 16:30-16:45 **Ryan Felice & Patrick O'Connor**  
Insights into the evolution of the avian tail apparatus from passeriform comparative anatomy
- 16:45-17:00 **James Hansford**  
To kill an elephant bird: Diversity and extinction in the Aepyornithidae

Free evening – Space reserved at The Standing Order (Wetherspoons pub) at High Street for those interested.

## Wednesday 2<sup>nd</sup> September

8:10-9:00 SVPCA registration at NOC Security desk (4<sup>th</sup> floor)

### ***Session — Basal tetrapods & gnathostome evolution***

*Chair* — John Clarke

9:00-9:15 **Marco Castiello & Martin Brazeau**

The braincase of the petalichthyid *Shearsbyaspis* revealed by x-ray micro-CT: implications for deep gnathostome phylogeny

9:15-9:30 **Timothy Smithson & Jennifer Clack**

A wandering entepicondylar foramen and the humeral twist: forelimb evolution in early tetrapods  
A wandering entepicondylar foramen and the humeral twist: forelimb evolution in early tetrapods

9:30-9:45 **Jennifer Clack *et al.***

A new lower jaw from the Late Devonian and its possible relationships

9:45-10:00 **Eduardo Ascarrunz *et al.***

A deeper look into *Triadobatrachus massinoti*: The earliest known lissamphibian (*Vertebrata: Tetrapoda*) re-examined by  $\mu$ CT-Scan

10:00-10:15 **Jennifer Hill *et al.***

Evolution of the lower jaw of gnathostomes

10:15-10:30 **Benjamin Otoo *et al.***

A taxonomic and palaeoecological investigation of an earliest Carboniferous fauna from Burnmouth, Scotland, UK

10:30-11:00 *Morning coffee break*

### ***Session — Taphonomy, trackways & ecosystems***

*Chair* — Mark Witton

11:00-11:15 **Donald Henderson**

Exceptional sets of dinosaur tracks and trackways from the St. Mary River Formation (Campanian-Maastrichtian) in Alberta, Canada

11:15-11:30 **Mark Purnell *et al.***

Experimental taphonomy and the anatomy of Cambrian vertebrates

11:30-11:45 **Peter Falkingham**

Difficulties in estimating mass from fossil footprints

11:45-12:00 **Kent Stevens *et al.***

Data-driven analysis and interpretation of fossil trackways

12:00-12:15 **Luke Hauser**

The Downton “Tooth Bed”: a lost world

12:15-13:30 *Lunch*

### ***Session — Crocodylomorphs and Gekkos***

*Chair* — Gareth Dyke

13:30-13:45 **Mark Young *et al.***

An early origin and diversification of macrophagous metriorhynchid crocodylomorphs, with evidence for multiple instances of parallel evolution

13:45-14:00 **Davide Foffa *et al.***

Evidence of macrophagous teleosaurids in the Corallian Group (Oxfordian, Late Jurassic) of the UK

14:00-14:15 **Thomas Smith & Mark Young**

The phylogenetic implications of re-describing the English crocodyliform specimens referred to *Pholidosaurus*

- 14:15-14:30 **Max Stockdale *et al.***  
Temperature-driven evolution and evolutionary stasis among the Crocodylomorpha
- 14:30-14:45 **Andrea Villa**  
A review of fossil gekkotans from the Neogene and Quaternary of Italy
- 14:45-15:45 *Afternoon coffee break / Poster Session (I)*
- Session — Phylogenetics & palaeoart**  
*Chair* — Darren Naish
- 15:45-16:00 **Joanna Baker *et al.***  
Positive phenotypic selection inferred from phylogenies
- 16:00-16:15 **Neil Brocklehurst**  
Rates and modes of body size evolution in early carnivores and herbivores: a case study from Captorhinidae
- 16:15-16:30 **Maren Jansen *et al.***  
The phylogenetic inference of cranial ontogenetic trajectories of basal Therapsida
- 16:30-16:45 **Michael Benton *et al.***  
Key characters and evolutionary rates in the origin of birds
- 16:45-17:00 **Mark Witton *et al.***  
Trends and patterns in modern palaeoartistry: a call for change
- 18:00-21:00 **Annual Auction and Reception**  
SeaCity Museum, Southampton

## Thursday 3<sup>rd</sup> September

- 8:10-9:00 SVPCA registration at NOC Security desk (4<sup>th</sup> floor)
- Session — Mammals (I)**  
*Chair* — Christine Janis
- 9:00-9:15 **Elsa Panciroli *et al.***  
Correlates between calcaneal morphology and locomotion in extant and extinct carnivorous mammals
- 9:15-9:30 **Jamie MacLaren & Sandra Nauwelaerts**  
Locomotor morphology of a 'living fossil' - 3D GMM assessment of forelimb anatomy in tapirs
- 9:30-9:45 **Marcela Randau *et al.***  
Vertebral column shape evolution in felids
- 9:45-10:00 **Chris Basu *et al.***  
Estimating body mass of the extinct giraffid *Sivatherium giganteum*, using a skeletal reconstruction and the minimum convex hull method
- 10:00-10:15 **Gertrud Rössner *et al.***  
Evolutionary evaluation of fundamental processes in the antler cycle as revealed by internal bone structure
- 10:15-10:30 **Roger Close *et al.***  
Evidence for a mid-Jurassic adaptive radiation in mammals
- 10:30-11:00 *Morning coffee break*



**Session — Mammals (II)**

*Chair* — Roger Close

11:00-11:15 **Andrew McIntosh & Philip Cox**

Musculoskeletal correlates of digging behaviour in African mole-rats

11:15-11:30 **Philip Morris *et al.***

Morphological convergence of the rodent-like masticatory apparatus in extant rodents and non-rodent diprotodonts

11:30-11:45 **Christine Janis *et al.***

On the probable predatory behaviour of the “marsupial lion”, *Thylacoleo carnifex*

11:45-12:00 **Elis Newham *et al.***

Cementum histology reveals physiology at the root of the mammalian phylogeny

12:00-12:15 **Ian Corfe *et al.***

Tooth ultrastructure and development of a 200 million year old mammal revealed with synchrotron nanotomography

12:15-13:30 *Lunch*

**Session — Teeth & Fish**

*Chair* — Ian Corfe

13:30-13:45 **Robert Goodall & Mark Purnell**

How the whale became: 3D tooth microtextures shed light on the complex dietary transition in archaeocete whale evolution (Cetacea: Archaeoceti)

13:45-14:00 **Robert Asher**

Pearly white & full of information: why we should all love teeth

14:00-14:15 **Hermione Beckett & Matt Friedman**

Revisiting *Landanichthys*, the oldest fossil mackerel?

14:15-14:30 **John Clarke & Matt Friedman**

The 100 million year struggle to teleost supremacy

14:30-14:45 **Jeff Liston *et al.***

Back from Purgatory: Three Rakers for Fishes at the Base of a Diversification

14:45-15:45 *Afternoon coffee break / Poster Session (II)*

**Session — Mesozoic reptiles**

*Chair* — David Unwin

15:45-16:00 **Saulo Limaverde *et al.***

Preliminary information on a new specimen of *Araripemys* (Pleurodira: Pelomedusoides) from the Early Cretaceous Crato Formation, Brazil

16:00-16:15 **Tom Stubbs**

The ecomorphological diversifications of Mesozoic marine reptiles

16:15-16:30 **Jessica Lawrence Wujek *et al.***

Mary Anning's marine reptiles: taxonomy, systematics, morphometrics and evolution of the iconic *Ichthyosaurus*

16:30-16:45 **Luke Muscutt *et al.***

The hydrodynamics of plesiosaurs

16:45-17:00 **Nick Longrich *et al.***

*Tetrapodophis amplectus*, a four-legged snake from the Early Cretaceous of Gondwana, and implications for the origins of snakes

19:00-22:00 **Conference Dinner**

Royal Thai Pier, Southampton