

**12th International Symposium on Early /Lower Vertebrates  
Dallas, Texas**

**Conference Program, 11-14 June 2011**

**Saturday, 11 June**

Please pick up your registration packet at the Radisson Hotel between 3 and 5:30 p.m. in the North Park Room.

**Reception** at the Dallas Museum of Nature and Science, 6-10 p.m.

Bus departs the Radisson Hotel at 5:30 p.m. and at 6:30 p.m., and returns to the hotel from the museum at 9:00 p.m. and 10:00 p.m.

**XTO Energy** of Fort Worth, Texas, made a generous contribution to offset part of the cost.

**Sunday, 12 June, Park Central Room, Radisson Hotel**

09:00-09:10 Welcome and opening remarks by Louis Jacobs, president of The Institute for the Study of Earth and Man at Southern Methodist University.

**Session 1**

Moderator: Robert Martin

09:10-09:30 **SCALE MORPHOLOGY AND SQUAMATION OF  
*ANDREOLEPIS* FROM THE LATE SILURIAN OF GOTLAND,  
SWEDEN**  
Donglei CHEN & Henning BLOM

09:30-09:50 **THE AFFINITY OF *LOPHOSTEUS* AND THE EVOLUTION OF  
OSTEICHTHYAN CHARACTERS**  
Henning BLOM, Anna JERVE, Qingming QU, Donglei CHEN, Tiiu  
MÄRSS, Vincent DUPRET, Sophie SANCHEZ & Per E. AHLBERG.

09:50-10:10 **THE SILURIAN FISHES, BIOSTRATIGRAPHY AND  
BIOGEOGRAPHY IN KALPIN AND BACHU REGIONS, THE  
TARIM BASIN, XINJIANG, CHINA**  
Wenjin ZHAO & Min ZHU

10:10-10:40 COFFEE BREAK

**Session 2**

Moderator: Lauren Sallan

10:40-11:00 **DEVELOPMENT OF THE EXOSKELETON IN  
OSTEOSTRACANS (AGNATHA, VERTEBRATA): NEW DATA  
ON SOME EARLY DEVONIAN FORMS FROM RUSSIA**  
Olga B. AFANASSIEVA

- 11:00-11:20 **EARLIEST INTACT CHONDRICHTHYAN DENTITION REVEALED BY CT SCANNING**  
John G. MAISEY, Randall F. MILLER & Susan TURNER.
- 11:20-11:40 **NOTES ON A NEW REVISION OF THE GENUS *RADOTINA* (PLACODERMI)**  
Valéria VAŠKANINOVÁ
- 11:40-12:00 **A NEW EARLY DEVONIAN LUNGFISH FROM GUANGXI, CHINA, AND ITS PALEOGEOGRAPHIC BEARING**  
Min ZHU & Tuo QIAO
- 12:00-12:20 **SQUAMATION PATTERN IN THE POROLEPIFORMES *HEIMENIA ENSIS* (DIPNOMORPHA, SARCOPTERYGII) FROM THE LOWER-MIDDLE DEVONIAN OF SPITZBERGEN**  
Jorge MONDEJAR-FERNANDEZ & Gaël CLEMENT

12:20-14:00 LUNCH

### Session 3

Moderator: Jessica Hawthorn

- 14:00-14:20 **FIN SPINES AND SCALES OF THE MIDDLE DEVONIAN SHARK *WELLERODUS PRISCUS*: TOWARDS A CHONDRICHTHYAN BAÜPLAN?**  
Daniel POTVIN-LEDUC, Richard CLOUTIER, Ed LANDING, Linda VANALLER HERNICK & Frank MANNOLINI
- 14:20-14:40 **A TRISTICHOPTERID SARCOPTERYGIAN FROM THE MIDDLE DEVONIAN OF RED HILL, NEVADA**  
Hans-Peter SCHULTZE
- 14:40-15:00 **OBSERVATIONS ON NEW 3-D COELACANTH FROM THE LATE DEVONIAN GOGO FORMATION, WESTERN AUSTRALIA**  
John A. LONG & Kate TRINAJSTIC
- 15:00-15:20 **UPDATE ON THE STRANGE NEW JAWED FISH FROM THE LATE DEVONIAN GOGO FORMATION, WESTERN AUSTRALIA**  
Kate TRINAJSTIC, Carole J. BURROW & John A. LONG
- 15:20-15:40 **PALEOBIOLOGICAL SIGNIFICANCE OF THE EARLY DEVONIAN MOTH LOCALITY, MACKENZIE MOUNTAINS, NORTHWEST TERRITORIES, CANADA**  
Mark V. H. WILSON, Stephanie A. BLAIS, Gavin F. HANKE & Lindsay A. MACKENZIE

15:40-16:10 COFFEE BREAK

16:10-17:20 **Poster Session I, Park Central Room**

Note: Posters should be set up prior to this time. Authors should be present during this session. Posters must be removed immediately after this session.

**NEW PLACODERMS FROM THE EARLY AND LATE  
DEVONIAN OF MINUSA REGION, RUSSIA**

Alexander IVANOV

**MIDDLE DEVONIAN PLACODERMS FROM THE  
PLATTERKILL FORMATION (NEW YORK, USA): TAXONOMY  
AND TAPHONOMY**

Catherine LAVOIE, Richard CLOUTIER, Daniel POTVIN-LEDUC, Ed  
LANDING, Linda VANALLER HERNICK & Frank MANNOLINI

**NEW DATA ON THE DIVERSITY AND AGE OF THE EARLY  
DEVONIAN MOTH LOCALITY, MACKENZIE MOUNTAINS,  
NORTHWEST TERRITORIES, CANADA**

Mark V. H. WILSON, Gavin F. HANKE, Stephanie A. BLAIS, Jeffrey  
W. GREENIAUS, Jessica R. HAWTHORN, Chelsea R. HERMUS, Michael  
S. B. JAMES, Lindsay A. MACKENZIE, Tiiu MÄRSS, Bradley R. SCOTT &  
Kenneth L. SOEHN

**NEW BOOTHIASPIDS (HETEROSTRACI: CYATHASPIDIDAE)  
FROM THE EARLY DEVONIAN OF THE WESTERN UNITED  
STATES**

David K. ELLIOTT

**ADDITIONS TO THE FISH FAUNA OF THE MIDDLE  
PENNSYLVANIAN MINTURN FORMATION OF COLORADO**

Wayne M. ITANO, Karen J. HOUCK & Martin G. LOCKLEY

**Monday, 13 June, Park Central Room**

**Session 4**

Moderator: Daniel Snyder

09:00-09:20 **DEVELOPMENT OF MESACANTHID *LODEACANTHUS*  
*GAUJICUS* AND COMPARISON WITH OTHER  
ACANTHODIFORMES**

Ieva UPENIECE

09:20-09:40 **NEW TEETH IN AN OLD FISH: DENTITIONS, CONJUNCTION  
AND CHONDRENCHLYS (TRAQUAIR, 1888)**

John A. FINARELLI & Michael I. COATES

09:40-10:00 **'PALAEONISCOIDS' FROM THE ALBERT FORMATION OF  
NEW BRUNSWICK, CANADA—A TAXONOMIC NIGHTMARE  
REVISITED**

Kathryn E. MICKLE

10:00-10:20 **A LATE VISÉAN SHARK NURSERY – TRANSITIONAL FROM  
ANADROMOUS TO STATIONARY FRESHWATER  
LIFESTYLE?**

Jörg W. SCHNEIDER & Jan FISCHER

10:20-10:50 COFFEE BREAK

### **Session 5**

Moderator: John Maisey

10:50-11:10 **A NEW OCCURRENCE OF THE GENUS *SAGENODUS*  
(*SARCOPTERYGII*, *DIPNOI*) FROM THE CARBONIFEROUS OF  
MONTCEAU-LES-MINES, FRANCE**

Sébastien OLIVE, Gaël CLEMENT & Jean-Marc POUILLON

11:10-11:30 **THE INIOPTERYGIANS AND SYMMORIFFORMES FROM  
THE LATE PENNSYLVANIAN OF KANSAS: ANATOMY AND  
IMPLICATION IN THE PHYLOGENY OF THE PALEOZOIC  
CHONDRICHTHYANS**

Alan Pradel

11:30-11:50 **PERMIAN SHARK *XENOSYNECHODUS* FROM TATARSTAN  
(RUSSIA): MORPHOLOGY AND SYSTEMATICS**

Alexander IVANOV

11:50-12:10 **HOW FAST WAS THE RECOVERY AFTER THE  
PERMO/TRIASSIC CRISIS? THE ANSWER FROM THE  
ACTINOPTERYGIAN FISHES**

Andrea TINTORI, Zuo-yu SUN, Cristina LOMBARDO & Da-Yong JIANG

12:10-12:30 **THE SURVIVORS: TRIASSIC XENACANTHIFORM SHARKS IN  
AUSTRALIA**

Susan TURNER

12:30-14:00 LUNCH

### **Session 6**

Moderator: Gary Johnson

14:00-14:20 **A VERY PRIMITIVE TETRAPOD FROM THE EARLIEST  
FAMENNIAN OF SOUTH TIMAN, RUSSIA**

Per Erik AHLBERG, Pavel BEZNOSOV, Ervīns LUKŠEVIČS & Jennifer A.  
CLACK

14:20-14:40 **CRANIAL ENLARGEMENT IN OPHIACODONTIDAE:  
EVOLUTIONARY TREND OR FUNCTION OF SIZE INCREASE?**  
Jessica R. HAWTHORN & Robert R. REISZ

14:40-15:00 **ONTOGENY OF *DIMETRODON MILLERI* (EUELYCOSAURIA:  
SPHENACODONTIDAE) AND IMPLICATIONS FOR  
TAXONOMY**  
Kirstin S. BRINK & Robert R. REISZ

15:00-15:20 **JACOB BOLL, ROBERT T. HILL, EDWARD DRINKER COPE,  
AND THE EARLY HISTORY OF PALEONTOLOGY IN TEXAS**  
Louis L. Jacobs

15:20-15:50 COFFEE BREAK

15:50-17:00 **Poster Session II, Park Central Room**

Note: Posters should be set up prior to this time. Authors should be present during this session. Posters must be removed immediately after this session.

**A PHYLOGENETICALLY BROAD-SCALED ANALYSIS OF  
MORPHOLOGICAL DISPARITY IN LOWER VERTEBRATE  
FINS**  
Olivier LAROCHE & Richard CLOUTIER

**A FIRST FISH FAUNA FROM THE LATE PERMIAN OF  
BAGHUK MOUNTAIN, IRAN**  
Oliver HAMPE, Vachik HAIRAPETIAN, Florian WITZMANN, Markus  
DORKA & Amir AKBARI

**THE HYBODONTIFORM SHARKS (CHONDRICHTHYES)  
FROM THE MARINE PERMIAN (LEONARDIAN) KAIBAB  
FORMATION OF NORTHERN ARIZONA**  
John-Paul HODNETT, David K. ELLIOTT & Tom OLSON

**MIDDLE PERMIAN FISH ASSEMBLAGES FROM WEST  
TEXAS**  
Alexander IVANOV, Merlynd NESTELL & Galina NESTELL

**ORIGIN OF *ORTHACANTHUS TEXENSIS* AND *O.  
PLATYPTERNUS FROMO. ?COMPRESSUS*  
(CHONDRICHTHYES, XENACANTHIFORMES) IN THE  
LOWER PERMIAN OF TEXAS, USA**  
Gary D. JOHNSON

17:00-19:30(?)

Optional visit to Jacob Boll's grave, led by Louis Jacobs, followed by liquid refreshments (food is available) at an excellent establishment on

Boll Street. Travel arrangements will be announced during the Coffee Break.

**Tuesday, 14 June, Park Central Room**  
**Session 7**

Moderator: Hans-Peter Schultze

09:00-09:20 **TAPHONOMY OF THE EARLY CAMBRIAN CHENGJIANG BIOTA: USING SEDIMENTOLOGY AND GEOCHEMISTRY TO RECONSTRUCT A PAST ENVIRONMENT**  
Lindsay A. MACKENZIE

09:20-09:40 **THE IMPACT OF SUCCESSIVE DEVONIAN EXTINCTIONS ON EARLY VERTEBRATE ECOSYSTEMS AND DIVERSITY.**  
Lauren Cole SALLAN Thomas W. KAMMER, William I. AUSICH & Lewis A. COOK

09:40-10:00 **PAEDOMORPHOSIS AND THE EVOLUTION OF THE DIPNOI REVISITED**  
Isabelle BÉCHARD & Richard CLOUTIER

10:00-10:20 **ENDOSKELETAL DEVELOPMENT IN EXTANT AND EXTINCT CHIMERIDS (CHONDRICHTHYES)**  
Cyrena RILEY, Eileen D. GROGAN & Richard CLOUTIER

10:20-10:50 COFFEE BREAK

**Session 8**

Moderator: Louis Jacobs

10:50-11:10 **FIRST RECORD OF EARLY CRETACEOUS COELACANTHS FROM NORTH TEXAS**  
John Graf

11:10-11:30 **A HOLOCEPHALIAN FROM THE PERMIAN OF TEXAS**  
Gordon Bell Jr. & Michael Polcyn (speaker)

11:30-11:50 **OXYGEN ISOTOPIC DATA FROM NONMARINE PALEOZOIC SHARK TOOTH ENAMELOID OF EUROPE AND TEXAS**  
Jan FISCHER, Silke VOIGT, Jörg W. SCHNEIDER, Michael M. JOACHIMSKI & Marion TICHOMIROWA

11:50-12:10 **CLIMATIC CONTEXT OF “OLSON’S GAP”**  
Neil J. TABOR & Timothy S. MYERS

12:10-12:30 **RESULTS FROM THE EXPLORATION OF NON-MODEL PERMIAN BASINS IN AFRICA**  
Christian A. SIDOR, Neil J. TABOR, Kenneth D. ANGIELCZYK, Sebastien STEYER & Roger M. H. SMITH

12:30-14:00 LUNCH

Session 8 continued

14:00-14:20 **THE ORIGINS OF AIR-BREATHING IN TETRAPODOMORPH  
VERTEBRATES**

John A. Long, J. Graham, Jennifer A. Clack & Per E. Ahlberg

14:20-14:40 **POSSIBLE OSMOREGULATORY FUNCTION OF THE BUCCO-  
HYPOPHYSIAL DUCT IN FOSSIL FISHES**

Oleg A. LEBEDEV (**absent; for discussion only**)

14:40-15:00

**“Business Meeting”**—Announcements welcomed (suggestions as to where to for the 13<sup>th</sup> Early/Lower Vertebrate Symposium?), including paying honor to departed colleagues.

15:00-15:30 COFFEE BREAK

15:30-15:45 GROUP PHOTO

19:00        **Symposium Banquet, University Park Room, Radisson Hotel**  
Guest Speaker, Louis Jacobs, “A Little Texas History.”

**12<sup>th</sup> International Symposium on Early/Lower Vertebrates  
Field Excursion to the Texas Permian**

**15-18 June 2011**

***Wednesday, 15 June***

**Depart** Radisson Hotel in Dallas at **07:30**. Please arrange to check out from the hotel prior to that time. Be sure you have reservations for the 18<sup>th</sup>. And don't forget your luggage needed for the trip. We will be traveling in Suburbans. Travel to Stop 1 via Denton, Jacksboro, and Archer City.  
Stop 1, Archer City Bonebed No. 3.  
Lunch in the field (provided).  
Stop 2, Briar Creek Bonebed.  
Stop 3, Rattlesnake Canyon Bonebeds.  
Travel to Wichita Falls; stay at the Howard Johnson Plaza Hotel, phone no. 940-766-6000 (in case you want to leave this contact with somebody back home).  
Breakfast and dinner are not part of registration costs.

***Thursday, 16 June***

Depart hotel at 08:00.  
Stop 4, Brushy Creek localities.  
Stop 5, Hackberry Creek C and West Franklin Bend C localities.  
Lunch at Stop 5.  
Stop 6, Spring Creek B locality.  
Stop 7, Little Moonshine Creek locality.  
Note: if there is interest, and time is available, we can stop at Dalquest's (and Johnson's) Lake Kemp sites. However, it is a dangerous descent down to lake level, and room for only a few people.  
Travel to hotel in Wichita Falls.

***Friday, 17 June***

Depart hotel at 08:00 (be sure you have your luggage!).  
Stop 8, East Coffee Creek localities.  
Stop 9, Rose Hollow Creek localities.  
Lunch at start of Stop 9.  
Stop 10, northwest Crooked Creek localities.  
Stop 11, Craddock Bonebed  
Travel to Vernon; stay at Holiday Inn Express & Suites, phone no. 940-552-0200.  
Breakfast and dinner are not part of registration costs (no restaurant at the hotel; best suggestions will be provided).

***Saturday, 18 June***

Depart hotel at 08:00 (do not leave anything behind!).  
Stop 12, southwest Crooked Creek localities.  
Stop 13, Ignorant Ridge (love that name, somehow appropriate) localities.  
Lunch on Ignorant Ridge  
Stop 14, Olson's Kahn Quarry area.  
Return to **Radisson Hotel in Dallas** (should arrive by 21:00, barring unforeseen problems.).  
Total distance traveled, 1300 km.

Dear Colleagues,

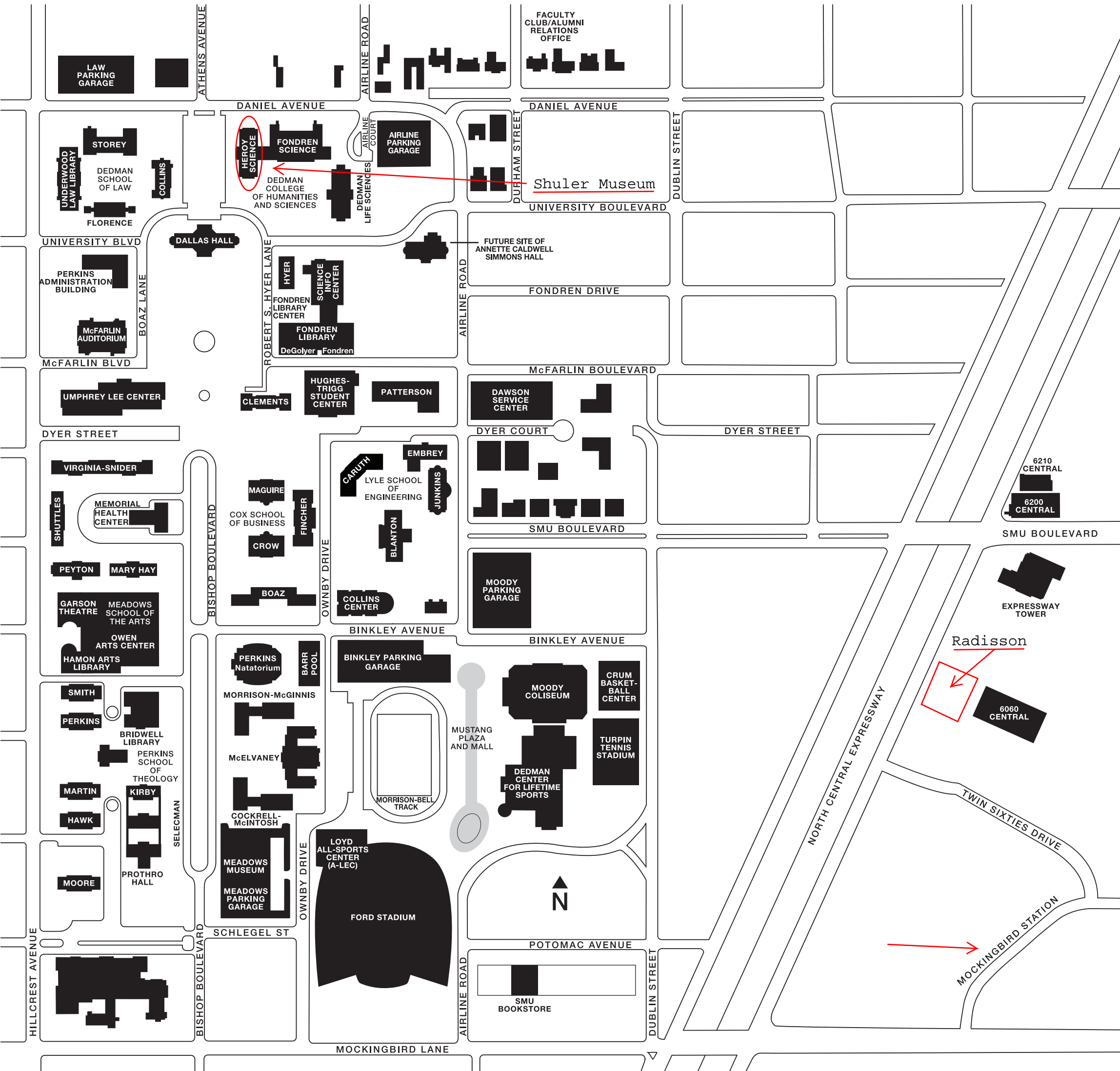
Attached with this note is a provisional schedule of talks and posters for the Conference and the Stops to be made on the Field Excursion, including hotel names and telephone numbers. Please contact [johnsong@smu.edu](mailto:johnsong@smu.edu) **before 20 May** if you find mistakes or if you have a scheduling conflict with your assigned presentation time. Also, if you wish to visit the fossil collections, please contact Dr. Dale Winkler ([dwinkler@smu.edu](mailto:dwinkler@smu.edu)) if you have not already done so; the collections are housed in the Heroy Building at SMU, within walking distance from the hotel (see attached map).

Other pertinent information was provided in the Second Circular (see <http://smu.edu/ISEM/EarlyVertebrates.html>). As our organization is informal, so is the attire; think warm and humid in Dallas and hot and rough in the field.

Finally, apologies to those of you that are unable to attend the Symposium, but you may find the list of titles to be informative.

On behalf of the Organizing Committee,

Gary D. Johnson



FACULTY CLUB/ALUMNI RELATIONS OFFICE

LAW PARKING GARAGE

DANIEL AVENUE

DANIEL AVENUE

HEROY SCIENCE

FONDREN SCIENCE

AIRLINE PARKING GARAGE

Shuler Museum

UNIVERSITY BOULEVARD

FUTURE SITE OF ANNETTE CALDWELL SIMMONS HALL

FONDREN DRIVE

UNIVERSITY BLVD

DALLAS HALL

PERKINS ADMINISTRATION BUILDING

McFARLIN AUDITORIUM

McFARLIN BLVD

McFARLIN BOULEVARD

UMPHREY LEE CENTER

CLEMENTS

HUGHES-TRIGG STUDENT CENTER

PATTERSON

DAWSON SERVICE CENTER

DYER STREET

DYER COURT

DYER STREET

VIRGINIA-SNIDER

MEMORIAL HEALTH CENTER

COX SCHOOL OF BUSINESS

LYLE SCHOOL OF ENGINEERING

MOODY PARKING GARAGE

SMU BOULEVARD

6210 CENTRAL  
6200 CENTRAL

SMU BOULEVARD

PEYTON MARY HAY

GARSON THEATRE MEADOWS SCHOOL OF THE ARTS  
OWEN ARTS CENTER  
HAMON ARTS LIBRARY

MAGUIRE

FINCHER

CROW

BOAZ

BLANTON

COLLINS CENTER

MOODY PARKING GARAGE

BINKLEY AVENUE

BINKLEY AVENUE

PERKINS Natatorium

BARR POOL

BINKLEY PARKING GARAGE

MOODY COLISEUM

CRUM BASKETBALL CENTER

Radisson

6060 CENTRAL

SMITH PERKINS

BRIDWELL LIBRARY

PERKINS SCHOOL OF THEOLOGY

MORRISON-McGINNIS

McELVANEY

MORRISON-BELL TRACK

DEDMAN CENTER FOR LIFETIME SPORTS

TURPIN TENNIS STADIUM

NORTH CENTRAL EXPRESSWAY

TWIN SIXTIES DRIVE

MARTIN HAWK

KIRBY

COCKRELL-McINTOSH

MEADOWS MUSEUM  
MEADOWS PARKING GARAGE

LOYD ALL-SPORTS CENTER (A-LEC)

FORD STADIUM

MUSTANG PLAZA AND MALL

N

POTOMAC AVENUE

SMU BOOKSTORE

MOCKINGBIRD STATION

HILLCREST AVENUE

BISHOP BOULEVARD

SCHLEGEL ST

MOCKINGBIRD LANE

AIRLINE ROAD

DUBLIN STREET

ATHENS AVENUE

AIRLINE ROAD

AIRLINE COURT

DEDMAN LIFE SCIENCES

DURHAM STREET

DUBLIN STREET

BOAZ LANE

ROBERT S. HYER LANE

AIRLINE ROAD