Export permits

Please note an export permit must be linked to an object or site that has to be created on SAHRIS! If the object/site you want to work on has not been created yet, you would need to do so. Thanks!

The proposal should include (you can fill these in below):

- a list of participants (name, affiliation, phone no, email addresses) and how they are involved;
- the name and address of the facility, including address, it is being scanned at;
- name and address of the museum/university department that currently hosts the object;
- names of the responsible person(s) during transport and while the fossil is at the facility;
- the period/time frame during which the fossil(s) will be outside the country;
- detailed information on the fossil(s), especially as it is a "unique" specimen;
- detailed information on the research project behind it & methodology including expected outcomes (i.e., the reason for export);
- the written confirmation of the institution that currently hosts the object that the object may be used as proposed and be returned in good condition;
- should there be any damage/destructive analysis (e.g., coating for higher resolution) undertaken, this needs to be stated in detail;
- Statement why this study cannot be done in South Africa.

Applicant (name and affiliation): this is usually the museum curator!

Dr. Bernhard Zipfel, Evolutionary Studies Institute, University of the Witwatersrand

Applied for (principal researcher):

Dr. Kristian J. Carlson, Evolutionary Studies Institute, University of the Witwatersand

Participants with affiliations, email addresses, phone numbers (& their role):
1) Dr. Paul Tafforeau, European Synchrotron Radiation Facility (ESRF), paul.tafforeau@esrf.fr, +33 (0) 438881974
Role: Overseeing scanning and acquisition of image data
2) Dr. Song Xing, Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, xingsong@ivpp.ac.cn
Role: Assisting with analysis and interpretations of results
3) Dr. Lorena Havill, Texas Biomedical Research Institute, lorenabird@gmail.com, +1 210 258 9875
Role: Overseeing comparative data collection and assisting with analysis and interpretation of results

The material will be **hand-carried** to __ESRF_____ (facility/institution) in __June, 2015___ (month, year) by __Dr. Kristian J. Carlson_____ (name of person responsible for transport) and brought back by _____ (leave blank if same person as above).
_Dr. Paul Tafforeau and Dr. Song Xing____ (name) will be involved with the __scanning_____ (e.g., transport/scanning) of objects and eventually with the study of the same objects_ (whatever else).

Institution incl. address that currently hosts the object:

Evolutionary Studies Institute

Palaeosciences Centre
University of the Witwatersrand
Johannesburg, WITS 2050
South Africa

Facility incl. address at which the experiment will be done:

European Synchrotron Radiation Facility
BP 220, F-38043 Grenoble CEDEX, France

Table of objects or upload file:

StW 389 – hominin distal tibia
StW 431 – hominin distal humerus

Material:
In terms of the materials, they are both from Sterkfontein Member 4. Dates for this Member vary, but it is reasonable to say between 2 and 3 million years. Both are distal parts of long bones. The partial tibia (StW 389) is mostly the distal articular surface place a few cms of the lower shaft. There are no other parts of the greater whole long bone. The partial humerus (StW 431) is approximately the distal 1/3 of the greater whole humerus. This specimen is associated with other fossil remains that comprise a partial skeleton. Neither of the two specimens are holotypes.

Time frame:
Transport to ___ESRF_____ (facility): _____June 25-26, 2015____(date)
Return date: _____June 30 – July 1, 2015_____ (date)

Aim/rationale:
xxx

Methodology (short):

Virtual palaeohistology is a growing field of interest because it is a non-destructive means of assessing microscopic structure in fossils. It relies on synchrotron technology, specifically the European Synchrotron Radiation Facility (ESRF), because of the development of unique protocols at this research facility. Images acquired through this technology are submitted to standard quantitative assessment protocols using the same software-based analytical approach as used during traditional histological slide-based studies. We will assess percentage of primary versus secondary bone in long bones, Haversian canal areas, numbers of osteons, osteon density, and osteon orientations.

Confirmation/permit by museum (Attached?):

Presumably this is a letter from the Wits curator, Dr. Bernhard Zipfel. Presumably this letter has been submitted to you directly.

Damage/destructive analysis? (if yes, explain in detail):

No, the imaging procedures to be used are non-destructive.

Statement why this study cannot be done in South Africa:

A synchrotron facility is unavailable in South Africa.