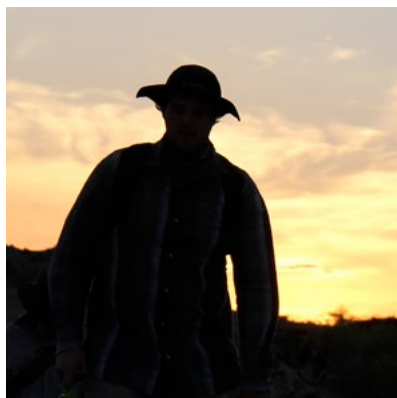


Study Abroad in Kenya at the Turkana Basin Institute's

# ORIGINS FIELD SCHOOL

*Humanity's Place in Nature*



Stony Brook University



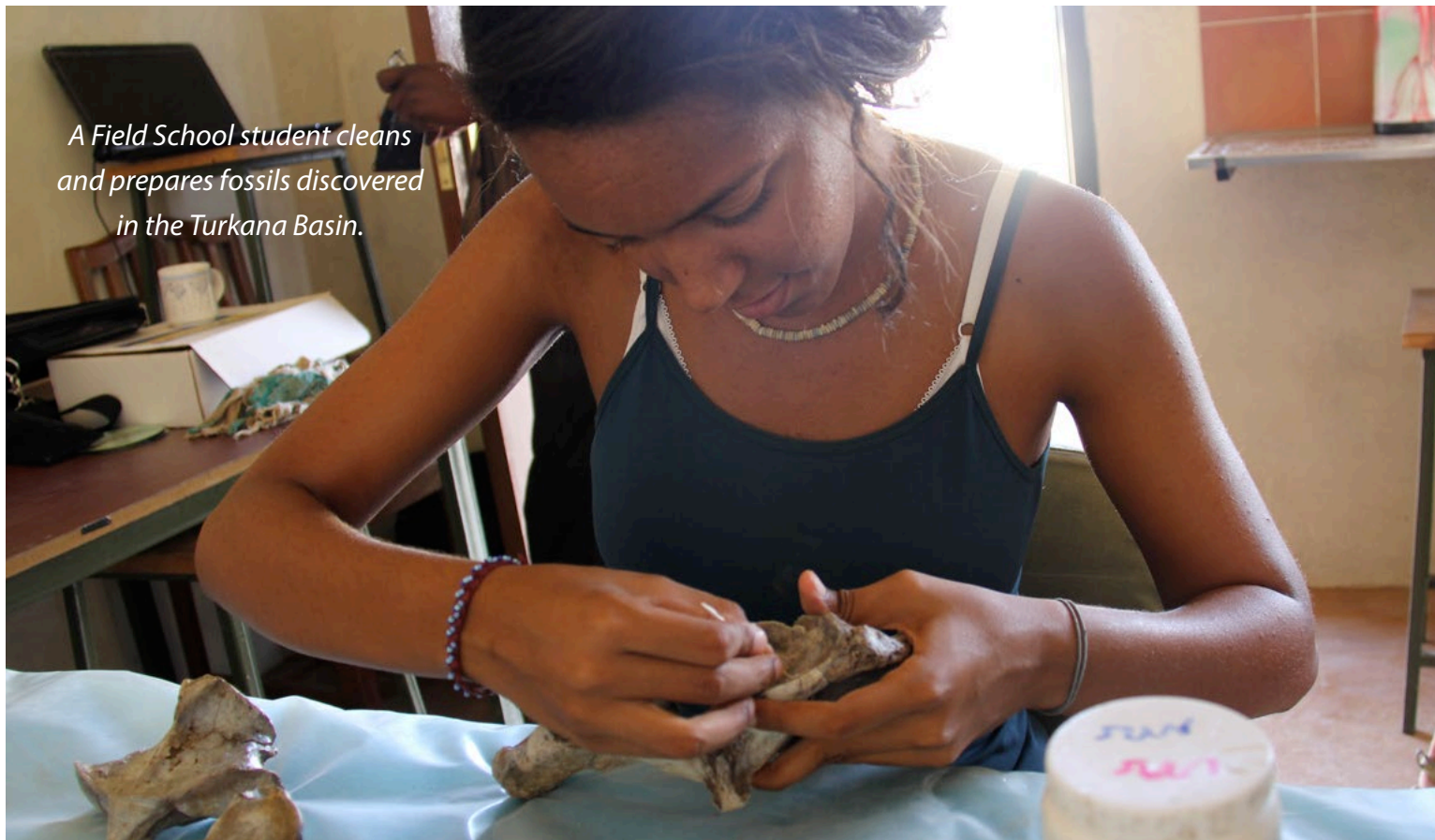
## A UNIQUE EDUCATIONAL ADVENTURE

**Ever wanted to visit Africa? Have an interest in science? Would you like to learn, hands-on, about field research in the Turkana Basin, one of the most remote and interesting areas in Kenya?**

*The potential for new, important scientific discoveries in the Turkana Basin is as vast as the region itself.*



*A Field School student cleans and prepares fossils discovered in the Turkana Basin.*



The Turkana Basin Institute is proud to offer the **Origins Field School**, a full-semester study abroad field education program at Lake Turkana in northern Kenya, through Stony Brook University.

For over 40 years, the Leakey family—in residence for parts of the program—have pioneered human prehistory research in this remote and beautiful region of Africa's Great Rift Valley, considered by many to be the "cradle of humanity."

The Turkana Basin preserves a wealth of ancient remains unrivaled anywhere in the world. Here you will find dinosaur fossils, 18 million-year-old leaf impressions, and diverse extinct mammals, including our human ancestors. Archaeological remains in the basin span from earliest times—2.3 million years to megalith sites built 4000 years ago.

## COURSEWORK

The 11-week program consists of 5 two-week 3-credit courses in which students will learn basic field techniques and principles of Ecology, Geology, Paleontology, Physical Anthropology, and Archaeology. Coursework includes lectures, lab and field exercises, overnight field excursions for hands-on learning, research methods and techniques, exams and quizzes, independent research projects, reading assignments, and oral presentations. Classes are taught by leaders in their fields who are actively engaged in field research and sustainability initiatives. **All coursework will be taught in English.** See respective pages for course descriptions. Courses are offered through Stony Brook University, a leading U.S. Research University accredited by the Middle States Association.

## DATES & DEADLINES

The **Origins Field School** runs every Spring and Fall semester (mid-January to end-March, and mid-September to end November, respectively). Please check the TBI Study Abroad website for detailed program dates, application deadlines and other info: [www.kenyastudyabroad.org](http://www.kenyastudyabroad.org).

## FIELD EXPERIENCE

In addition to the field activities that are already a part of this program, undergraduate and graduate students can opt to enroll in an additional course, ANT or ANP 399/599, in order to pursue independent field research while at TBI, whether before, during, or after the semester abroad.

Please visit [www.kenyastudyabroad.org](http://www.kenyastudyabroad.org) and/or contact the Program Director for more information.





Course 1: ANP 304

## Ecology: Linking People and Nature

This course introduces students to the fundamental principles and techniques of basic field ecology and evolutionary biology in the context of the modern East African Lake Turkana environment. The course includes a mixture of fieldwork, lectures, independent research projects and readings.

Students conduct fieldwork as part of long-term ecological monitoring, including on plant and insect communities, learning basic research skills including proposing, designing and carrying out a scientific project. The course combines lab and practicals with hands-on exploration of the rich and diverse habitats of the region from the wildlife-rich savannahs of north-Central Kenya, to riverine forests and deltas, dryland grasslands, freshwater habitats and the islands systems of Lake Turkana.

The course is intensive and divided into four broad areas:

- **General African Dryland and Grassland Ecology.**
- **Freshwater Ecology and Biodiversity of Lake Turkana.**
- **Life on the edge: Coping with heat and drought stress.**
- **People and Nature: Ecosystem Services and the Biology of Vectors.**



*Lake Turkana provides a vital wetlands habitat in an otherwise arid part of Kenya.*

*Opposite page, from top: collecting an insect specimen; Zebra in Nakuru National Park; wading in the Turkwel River.*





Course 2: GEO 303

# Sedimentary Geology & Geochronology

This course introduces the current perspectives on the origins and evolution of the Turkana Basin, Kenya. Students learn how to apply fundamental geological concepts to the sediments and rock units to provide a foundation for the chronology and context for recorded events in human evolution. Emphasis is given to sedimentation, stratigraphy, volcanism, and tectonics, as they apply to local geology, including training in field methods.

Modern terrestrial processes and landscape evolution are examined using features present in the Turkana Basin. Consideration is also given to broader geologic events spanning the Oligocene to the present. Geologic concepts are linked to modern and ancient environments, archaeology, and paleoanthropology in northern Kenya. It is a field-based course involving visits to important geological and fossil sites. Graded work includes fieldwork assignments, quizzes, and a final exam.



*The eroding badlands of the Turkana Basin provide an extraordinary repository of fossil sites that stretch from the time of the dinosaurs to modern humans.*

*Opposite, from top: exploring a local cave; collecting a tuff sample; field school students on a geology field trip.*





Course 3: ANP 305

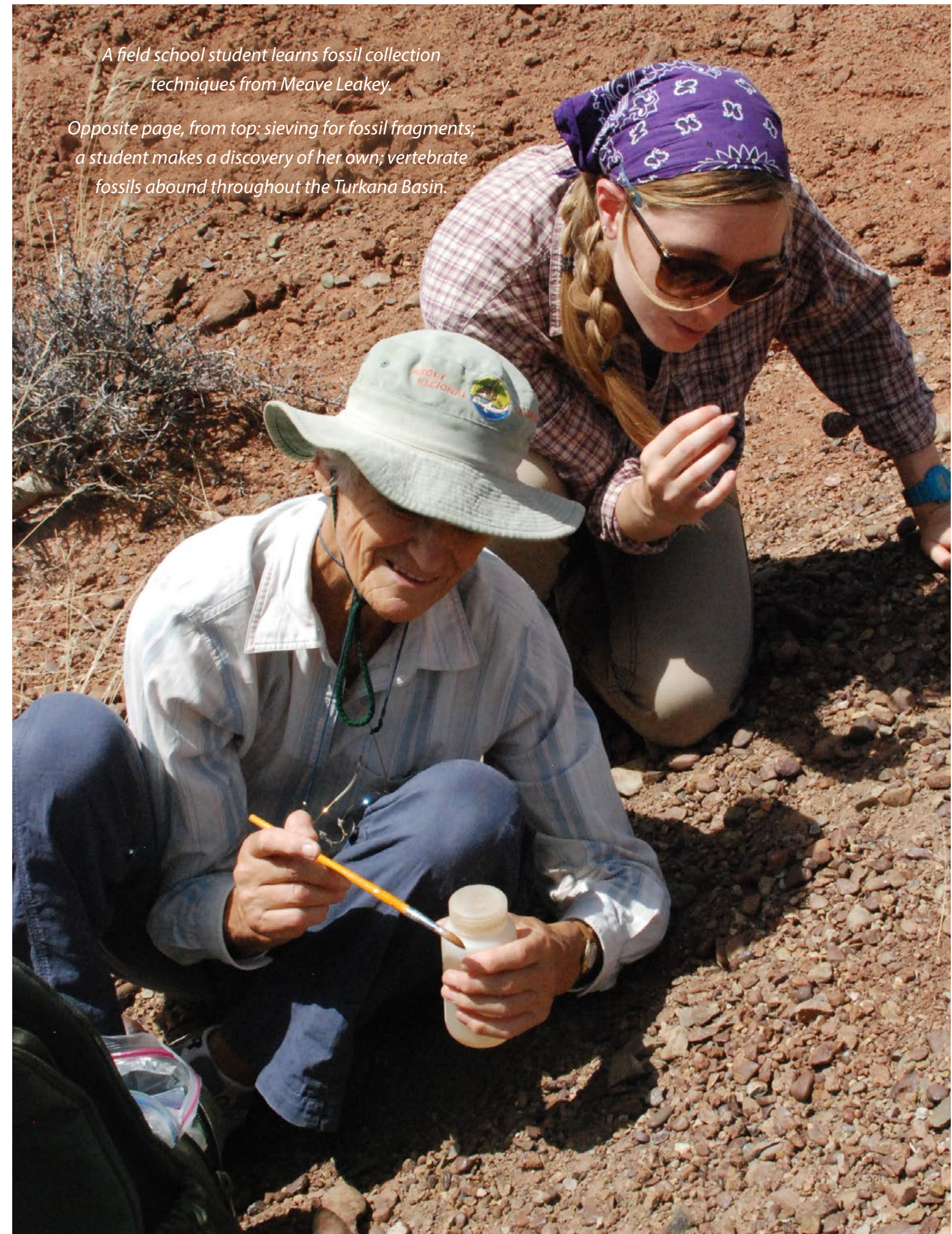
## Earth & Life Through Time

Vertebrate fossils are important sources of information about the appearance, evolution, and extinction of major organisms. As such, they provide a valuable window into changes in climate and selection pressures, and organisms' diverse adaptive responses to these changes. They are also significant in placing hominid discoveries within a relative local chronology, and helping reconstruct environments associated with hominid finds.

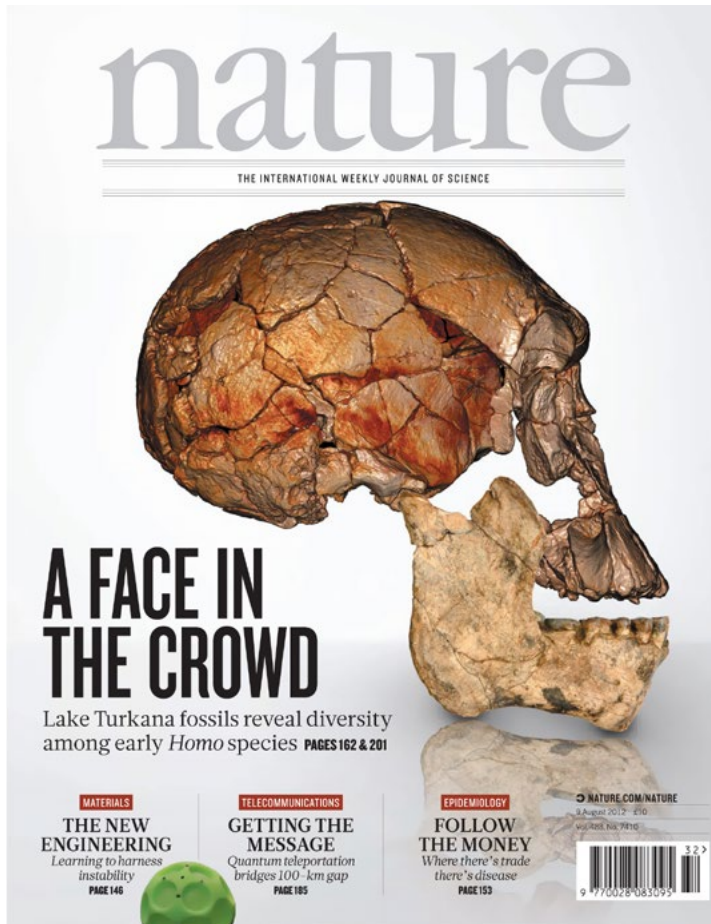
This course acquaints students with laboratory and field methods of vertebrate paleontology employed in different chronological contexts of the Turkana Basin, used to solve diverse theoretical questions.

*A field school student learns fossil collection techniques from Meave Leakey.*

*Opposite page, from top: sieving for fossil fragments; a student makes a discovery of her own; vertebrate fossils abound throughout the Turkana Basin.*







## Course 4: ANP 306

# Human Evolution

The Turkana Basin is home to many paleoanthropological discoveries that fundamentally reshaped ideas about human evolution. Important finds from the Turkana Basin, including Nariokotome ("Turkana boy") and KNM-WT 17000 (the "Black Skull") will be highlighted in lecture, lab and field activities, and their relevance to the larger picture of human evolution will be explored. In addition to highlighting the key role that Turkana Basin fossils have played in human evolutionary studies, lectures, seminars, and labs will cover the complete span of our evolutionary history from Miocene apes and the earliest putative hominins to the evolution of modern humans. Field trips to discovery locations will provide students with the opportunity to understand the geological context of important fossils of the Turkana Basin.



*Richard and Meave Leakey provide personal accounts of their groundbreaking discoveries. The Leakeys and their colleagues are responsible for discovering much of the fossil evidence for human evolution.*

*Opposite, from top: pillar marks the discovery site of fossil hominid skull; discoveries from the Turkana Basin make the cover of Nature magazine; casts of important hominid specimens.*





Course 5: ANT 307

## Prehistoric Archaeology of Africa

This course familiarizes students with African Stone Age archaeology through class lectures and lab and field exercises. Students learn how archaeologists document the behavioral characteristics of early humans in Africa through the study of material cultural evidence. During field excursions, they learn diverse methods of survey and excavation techniques appropriate for different sites and contexts.

Primary areas of discussion throughout the coursework include the question of the cognitive status of early humans implied by their technologies and the evolution of human adaptation from an evolutionary perspective, exploring the relationships between stone tool technology, paleoenvironments, hominin species and cognitive evolution.

Students visit archaeological sites of various ages, some very rich in stone tools and pottery, and learn how to make and use stone tools.



*A 1.5 million-year-old Acheulian hand axe.*

*Opposite page, top: The Turkana Basin is world-famous for its archaeological wealth. Bottom: a field school student tries her hand at making stone tools, guided by Professor Sonia Harmand.*



## LIVING ARRANGEMENTS

Field Schools are based at TBI's Ileret and Turkwel research facilities, built respectively on the east and west sides of beautiful Lake Turkana. Students live in comfortable, safe, dormitory-style quarters. There is clean water, showers, flushing toilets and electricity. Mosquito nets, towels and bedding are provided. Food is plentiful, fresh and varied. Limited internet and cell phone service is available.

*Clockwise from left: a view of the classroom and research labs ; the outside "lab"; downtime around the dorm; a typical mealtime spread.*





## ABOUT TBI

The Turkana Basin Institute (TBI) is a privately funded, non-profit initiative, founded by Richard Leakey and Stony Brook University. It is a collaborative, international, multi-disciplinary enterprise that seeks to facilitate fieldwork within the Lake Turkana Basin by providing logistical

support to researchers. The primary research focus is human prehistory and related earth and natural sciences. TBI is committed to safeguarding the extensive fossil deposits in the region through engagement with the local communities.



*Aerial view of TBI's Ileret campus, on the east side of Lake Turkana.*

## RESEARCH IN THE TURKANA BASIN

TBI facilitates a variety of research projects directed by internationally renowned scientists, many of whom also serve as TBI Field School instructors. Ongoing projects include the **Koobi Fora Research Project**, co-led by Meave and Louise Leakey, which explores the Koobi Fora and Nachukui Formations; the **West Turkana Archaeological Project**, led by Sonia Harmand and Jason Lewis, which excavates and examines

some of the oldest stone tools known to science; the multidisciplinary **Later Prehistory of West Turkana Project**, led by Stony Brook faculty archaeologists Elisabeth Hildebrand and John Shea; the Pleistocene-focused In Africa Project, led by Marta Lahr and Rob Foley of the University of Cambridge, and an exploration of primates in early Miocene deposits led by Stony Brook faculty member James Rossie.



*Meave and Louise Leakey sieve for fossil fragments with the help of their team.*

*Photo credit: Mike Hettwer*



*For more information, please contact:*

**Turkana Basin Institute**  
**Stony Brook University**  
**turkanabasin@stonybrook.edu**  
**Telephone: 631.632.5800**

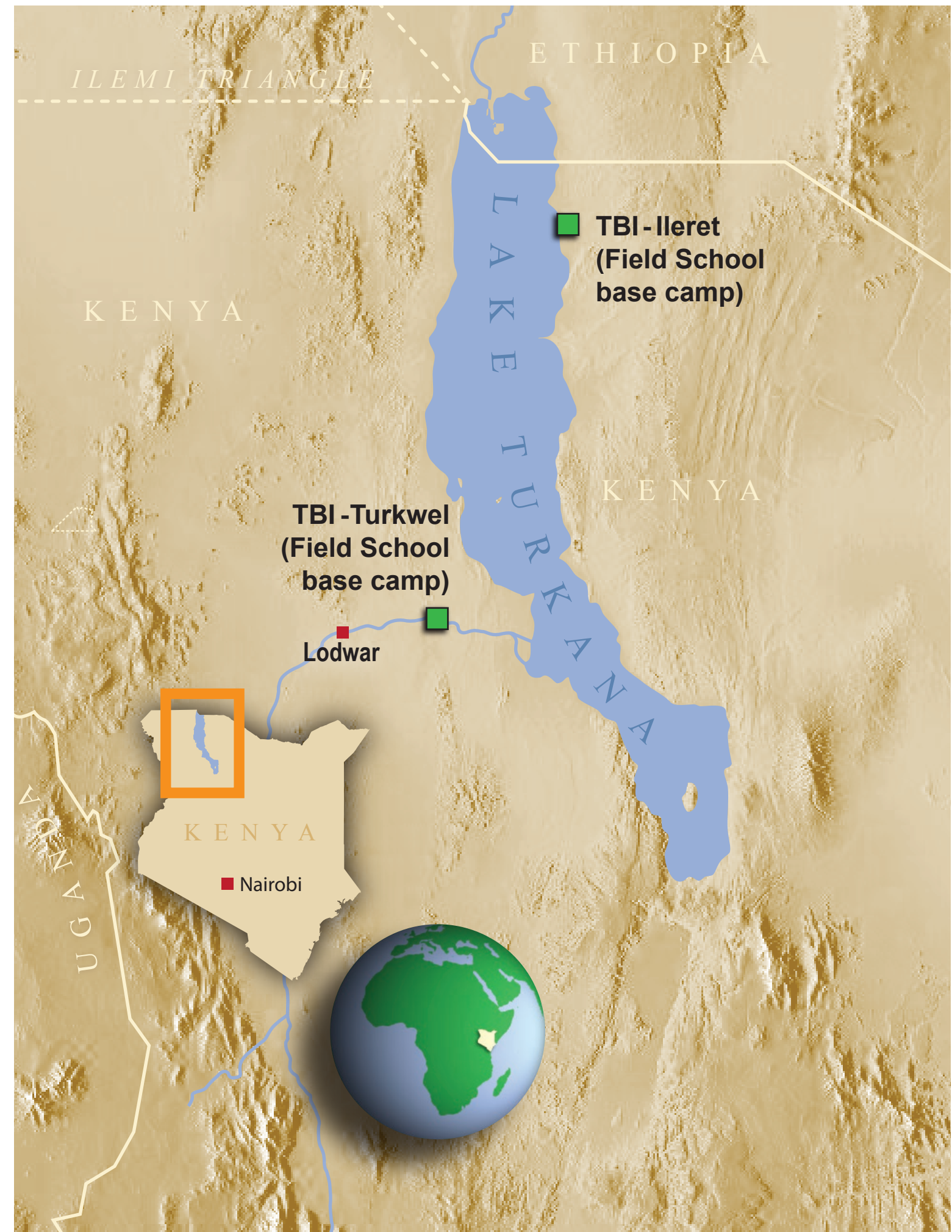
*or visit*

**www.KenyaStudyAbroad.org**



*“Looking back at 40 years  
of work in the Turkana  
Basin underlines how  
much more can and must  
be done.”*

*– Dr. Richard Leakey*





Looking for an educational and personal adventure? The Turkana Basin Institute and Stony Brook University are offering a unique Study Abroad opportunity in Kenya. The program is open to all majors, and you'll earn 15 upper-division credits while studying in one of the most beautiful, interesting, and scientifically important parts of the world.

Learn more at

**[KenyaStudyAbroad.org](http://KenyaStudyAbroad.org)**

