Field Trips

Biosphere 2 ~ Where Science Lives! (9:30—4:00)

Biosphere 2 is more than a remarkable architectural icon – it is also a nexus point for interdisciplinary research to advance our understanding of the natural and man-made environment, as well as for dynamic science education and public outreach (http://b2science.org/). This field trip will provide a behind-the-scenes tour of the research facility, allowing participants to see and hear, first-hand, about the model tropical forest, ocean, savannah, and desert biomes. We’ll also visit the new Landscape Evolution Observatory (http://b2science.org/leo), which is the largest interdisciplinary experimental watershed. Here, Biosphere 2 researchers study the intersection of the four realms of physical geography (lithosphere, atmosphere, hydrosphere, and biosphere) and their impacts on carbon, water, and energy cycling. The trip will continue to Oracle State Park (http://azstateparks.com/Parks/ORAC/) to have lunch, visit the historic Kannally Ranch house, and walk/hike the scenic northern foothills of the Catalina Mountains.

A box lunch from Paradise Bakery is included. (We’ll coordinate meal selection with participants in August).

Leaders: Greg Barron-Gafford (UA Biogeographer & Ecosystem scientist; http://www.u.arizona.edu/~gregbg/) and Kevin Bonine (Director of Education and Outreach, Biosphere 2; http://kebonine.faculty.arizona.edu/).

Capacity: 36  Cost: $30 (includes entrance fee)
Sky Islands: Biogeography, Fire Ecology, and Forest Management on Mt. Lemmon (9:00—4:00)

Mount Lemmon provides the most prominent geophysical and biophysical feature of Tucson’s landscape. Spanning elevations from 2,500 to 9,500 feet, Mt. Lemmon is home to a dramatic diversity of ecological communities, climates, and disturbance regimes. On this field trip, we will explore how the human footprint has played a role in reshaping ecological communities, disturbance dynamics, and landscapes from the desert to subalpine forests. As we explore Mt. Lemmon’s topography, we will be traveling through biomes from subtropical desert to the equivalent of high latitude mixed conifer forest.

Topics will include sky island biogeography, climate modes and climate variability, biosphere-atmosphere interactions, fire ecology past and present, and the effects of recent disturbances and management decisions on the landscape. Devastating fires in 2002 and 2003 provide a natural laboratory for exploring post-fire ecological trajectories. Current management approaches to species protection, habitat protection, and sustainable ecosystem function provide additional topics for discussion.

Traveling by van, our stops include a desert overlook, mid-elevation grassland and savanna, canyon forest, and fire-scarred mountain-top village. Our final stop will be at a UA-sponsored flux tower site, where research on carbon and water cycling connects with forest and fire management.

A box lunch from Paradise Bakery is included. (We’ll coordinate meal selection with participants in August).

Leaders: Becky Brice (UA geographer and dendrochronologist), Jesse Minor (UA geographer and fire ecologist), and Rebecca Minor (Research Specialist, Biosphere 2).

Capacity: 20          Cost: $20
Military and Security Landscapes of Baja Arizona (9:00–5:00)

Tumacácori National Historic Park

On this field trip we will explore military and security landscapes of southern Arizona ranging from early Spanish and Anglo-American colonial settlement to contemporary Homeland Security and boundary enforcement. We will look at the physical impacts of military and security infrastructures on the landscape as well as their social implications. Specific militarized sites we will visit include Tumacácori National Historic Park, the Titan Missile Museum (a former U.S. ICBM missile silo), locations associated with the ‘virtual fence’ SBInet, and the U.S. / Mexico border wall. We will also talk with leaders of communities engaged in the struggle for human rights and against border checkpoints and militarization.

A box lunch from Paradise Bakery is included. (We’ll coordinate meal selection with participants in August).

Leaders: Geoffrey Boyce (doctoral candidate, School of Geography and Development, the University of Arizona), Todd Miller (journalist and author, Border Patrol Nation), and Jeffrey McGovern (historian, U.S. Air Force, Davis-Monthan AFB).

Capacity: 10  Cost: $35 (includes entrance fees)
Ellsworth Huntington called the Sonoran Desert “The Greenest of Deserts” in his 1911 paper. The 62 year-old Arizona-Sonora Desert Museum celebrates the desert’s remarkable diversity of plant and animal species and of minerals in its 21 acres. The majority of the museum’s displays are alive and outside. Two miles of trails provide opportunities to see many of the museum’s 230 animal species including pumas, coati, rattlesnakes, javelina, hummingbirds, otters and 20 that are endangered. Over a thousand plant species growing on museum grounds provide an opportunity to explore plants’ evolutionary and co-evolutionary adaptations. ‘The world’s most comprehensive regional mineral collection’ is housed in a cave facsimile, reminiscent of nearby Kartchner Caverns. Other indoor exhibits include a new aquarium and a reptile enclave. The museum has two restaurants, one for fine dining (delicious), a more casual food court, two snack shops and water fountains. The Ironwood Gallery displays wildlife paintings. There are also two gift shops.

The drive out to the Museum crosses Gates Pass in the rugged Tucson Mountains, where we will stop for a photo op. We’ll have views of thousands of Saguaro as we look out across both the Tucson and the Avra Valleys. This field trip provides transportation to and from the museum and the entrance fee. You will be free to wander at your own pace and enjoy any on-ground events that are occurring (the daily 10:00 ‘Free Flight’ demonstration is a memorable delight!). You can purchase lunch in one of the eateries and enjoy the quiet, spectacular beauty of the native desert surroundings while you dine.

Leader: Mark Kear

Capacity 25  Cost $33 (includes entrance fee)
Southern Arizona has its share of classic Western water conflicts, epic water tales, big infrastructure, and local innovation. On this field trip we will explore both human and physical impacts of managing water in and around a desert city. We will visit several parts of the water system in the Tucson area including the Central Arizona Project, the Avra Valley, and the Tohono O’odham Nation’s San Xavier Reservation. The Federal government’s Central Arizona Project is a large canal and pumping system that brings water uphill over 300 miles from the Colorado River to a series of infiltration ponds near Tucson where water is recharged into the aquifer. In the Avra Valley, the City of Tucson has water facilities where innovative water management practices include conjunctive groundwater and surface water management as well as recycling of treated wastewater. While visiting the Tohono O’odham Reservation, south of Tucson, we will consider the issues of tribal water rights in Arizona. We will meet with representatives of NGOs and community members who are striving to make rainwater harvesting a part of the area’s sustainable water use. While on the reservation we will also visit beautiful, historic Mission San Xavier del Bac (“The White Dove of the Desert”). Each field trip stop will include background commentary by the trip leaders, other local experts and stakeholders.

A box lunch from Paradise Bakery is included. (We’ll coordinate meal selection with participants in August).

Trip leaders: Christopher Scott and Carl Bauer

Capacity: 12 Cost $20

(Graphics from: http://upload.wikimedia.org/wikipedia/commons/thumb/b/b9/Arizona_cap_canal.jpg/480px-Arizona_cap_canal.jpg; https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcRa5yAQ_UK8hmFWh28ENg2t5C XmT_T3l2_iGo9b0nla08KavdEg)
APCG Architectural Tour of Tucson: From the Foothills to the Mission
(2:00–5:00)

This 3-hour tour will begin in the foothills above La Paloma Resort. We will work our way down across a Sunbelt city, sampling some of the hidden aspects of our urbanism – the good, the bad, the ugly … and the beautiful – including the DeGrazia adobe gallery site and grounds, historic districts with a Sonoran rural vibe, instances of urban “guerilla” development that subvert the grid or confound expectations, a tour of a 19th century private traditional patio and downtown barrios, and a private tour (with access to nonpublic spaces) of the 18th century San Xavier del Bac Mission – an O’odham parish church and Spanish Colonial masterpiece of astonishing beauty and stature. Standing in the plaza in front of the church, we will survey what our collective history has wrought, from the ramadas surrounding us selling Indian fry bread to the faithful and non-faithful alike on pilgrimages of their own meaning, and we will be able to lift our eyes back to the northern foothills, lifetimes of development stretching between us.

Leaders: Joseph Wilder, Director of the UA Southwest Center; Jeffrey Banister, Research Social Scientist in the Southwest Center and School of Geography and Development; and Bob Vint, local architect and UA Adjunct Professor of Architecture.

Capacity: 20 Cost $10
In August, 1775, Hugo Oconór, an officer of the Spanish Army, marked out the dimensions and layout of the Presidio of Tucson, northernmost of the Spanish garrisons of Sonora Province, and the jumping off place for the land route to California being pioneered by other soldiers under command of Juan Bautista de Anza. The next year, soldiers arrived and began to build the walled fortification that defined the city of Tucson throughout Spanish and Mexican rule. After the U.S. purchase of Southern Arizona, the city outgrew its walls and transformed itself from a pueblo into an American city with significant Hispanic character.

This walking tour will examine some of the early buildings in Tucson, starting with the oldest house, and work through a historical cross-section to places built around 1900. Themes to be examined include: Hispanic vs. Anglo-American housing construction and layout, changes after the arrival of the Southern Pacific Railroad in 1880, and adaptations to the local human ecology. A subtheme will consist of the landscape of historic preservation.

We will take the Sun Link Streetcar from the University of Arizona campus to downtown Tucson. The walking tour should take approximately 1.5 hours and cover one mile. As the fieldtrip will end near lunchtime, you will be given a list of excellent nearby restaurants to explore on your own, should you choose to eat downtown.

Leader: Jim Sell

Capacity: 30  Cost: $5
The University of Arizona Green Walking Tour (GWT) is a publicly accessible, self-guided, smartphone application featuring urban sustainability in Tucson’s renaissance as an eco-city. The GWT combines 50 sites, 16 tours, and over 100 green “features” and practices that include solar energy arrays, water harvesting, green infrastructure, energy efficiency and eco-friendly neighborhoods. The on-campus tour includes the University of Arizona’s Thermal Ice Storage plant; one of the country’s largest interconnected cooling systems, it utilizes chilled water and recognizes $560,000 in annual utility cost reductions.

An off-campus highlight is the Brooklyn Pizza and Sky Bar, with a Solar Array that produces enough energy to power the bar and pizza restaurant. Along the way, stops will be made at notable green infrastructure and water harvesting sites.

This field trip will follow the Green Walking Tour and start on the campus of the University of Arizona. The trip includes a ride on the new TucsonModern Streetcar with stops at key “tours of sustainability” (which will require easy walking). Lunch at Brooklyn Pizza is included.

Leaders: Linda Samuels and Ardeth Barnhart

Capacity: 20  Cost: $14

The complete online tour follows the 4.2 mile “all-electric” Sun Link Tucson Streetcar from the University of Arizona to the heart of Downtown. Locations of electric-car charging stations and extended bike trail tours are also clearly marked. The GWT is a University of Arizona Renewable Energy Network (UA REN) mobile app developed in collaboration with the Sustainable City Project (SCP) and the City of Tucson.
Chicano Murals as Sites of Struggle, Celebration and Resilience in Tucson (10:00—3:00)

This tour will take participants to a number of urban sites where murals depicting various elements of Chicano and barrio history mark the landscapes of schools, community centers, recreational centers, and local gardens. Each of these sites tells stories of urban struggles in Tucson and the borderlands—depicting multifaceted connections to place, land and peoples. We will visit with local community members at various sites to learn how the murals function to reclaim space, maintain cultural history and further sustained strategies toward food justice and self-determination in the city. Among the sites we will visit are Barrio Anita’s Oury Park, El Rio Neighborhood Center, La Pilita Museum and El Tiradito Shrine.

We will stop for lunch at Tania’s Taqueria, so participants are encouraged to bring $10 for lunch.

Leader: Sarah Launius

Capacity: 12  Cost: $17
The Tohono O’odham Nation is the second largest reservation in Arizona and has a bi-national population that lives both in southern Arizona and northern Mexico. There are numerous issues with the Tohono O’odham Nation as a reservation including the interface between border security and indigenous sovereignty, as well as the land base being divided up into non-adjacent reservations and districts. The morning will focus on border security, while the afternoon will emphasize traditional agriculture.

Because the trip starts early and involves considerable driving, a boxed breakfast will be provided, which participants can eat in the van. The morning will include a stop at the Tohono O’odham Cultural Center and Museum where there will be time to view the collection. Representatives from the Chukut Kuk District, Tohono O’odham Nation, and Border Patrol will discuss border security. A ‘contemporary lunch with traditional O’odham inspiration’ will be enjoyed at the Desert Rain Café in Sells, the capitol of the Nation. After lunch, the trip leaves for San Xavier where we will tour the San Xavier Cooperative Association’s Farm.

The Association emphasizes traditional food crops and economic development while nurturing the land. The final stop will be Mission San Xavier del Bac, which was established in 1692 and is still used for worship today. Breakfast and lunch included.

(Photos by Lily House-Peters)

Leaders: Kenneth Madsen and Lily House-Peters

Capacity: 24 Cost: $30
The University of Arizona boasts both historic and cutting edge science labs. This docent-led tour offers participants an opportunity to visit two such on campus institutions. In 1937, A. E. Douglass, founder of the modern science of dendrochronology, established the Laboratory of Tree-Ring Research at the University of Arizona. The Tree-Ring Lab is recognized worldwide as a preeminent center for the advancement of tree-ring techniques and the broad application of dendrochronology in the social and environmental sciences (http://ltrr.arizona.edu/). The lab’s history is a source of pride. Those who work at the lab are dedicated to the ideals of excellence in research, teaching, and outreach. The docent leader will discuss the Lab's rich history, guide visitors through dendro-science lab spaces, and more.

Participants will then walk a short distance to the Steward Observatory Mirror Lab. This part of the field trip offers an opportunity to experience how UA innovations are producing the world’s largest telescope mirrors on campus. This tour provides a behind the scenes look at the groundbreaking work being done at our facility. Cutting-edge optical technology and the revolutionary spin-casting processes are making telescope mirrors, that will produce images of distant parts of the universe with amplification and clarity never before seen. Current projects at the Mirror Lab include the Large Synoptic Survey Telescope (LSST), Giant Magellan Telescope (GMT), and 6.5 meter San Pedro Mártir Telescope. The GMT is the result of 100 years of astronomical research and telescope building that will open new vistas of exploration for the next generation of astronomers. These new generation giant optical telescopes will allow astronomers to peer further back towards the beginning of time than ever before.

A box lunch from Paradise Bakery is included. (We’ll coordinate meal selection with participants in August).

Leaders: LTRR Docent and UA Mirror Lab Docent.

Capacity: 20  Cost: $20 (includes entrance fees)