BUGS & BIRDS: A NEXUS IN TEXAS (part 2)
- A Feature Article by Ted C. MacRae & Christopher R. Brown
(Continued from the Dec. 2004 issue of *Nature Notes*)

Continuing upriver from Bentsen-Rio Grande River State Park, the Rio Grande floodplain narrows considerably and turns northwest. The subtropical woodland communities that characterize (or used to) the broad lower Rio Grande Valley (LRGV) give way to narrow corridors of riparian habitat along the river bordered by arid, upland chaparral habitats. It is here we find Falcon Lake, the first in a series of several man-made impoundments along the Rio Grande River. These impoundments are an important tool for managing water resources in this arid land and also provide recreation. However, as mentioned previously, they have also altered the natural cycles of flooding in the LRGV, leading to chronic decline in what little remains of the subtropical woodland habitats found in that area. Much of the upland chaparral is utilized for grazing and exhibits little diversity in plant life due to overuse. However, splendid examples of the original plant diversity can be seen at Falcon Lake State Park on the north side of the lake. This was our next destination. .

Just before arriving at the state park, we stopped at an abandoned county park in Falcon Heights. This "town" is little more than a junction leading to the park in one direction and the Falcon Dam crossing into Mexico in another. The abandoned park appears to offer little in the way of natural history study—broken, crumbling, concrete picnic tables, waist high weeds, and declining, half dead trees...Did I say "**half-dead trees?**" I suppose you've now figured out why we stopped there. In fact, I found this spot several years ago on a tip from an entomologist who lives in Houston. He had told me of dying ebony trees (*Ebanopsis ebano*, formerly called *Pithecellobium flexicaule*) at this spot from which he had reared two species of *Paratyndaris* buprestids. Few species in this genus are commonly encountered, and no larval hosts had been determined previously for either of these species. In fact, one of them had not been recollected since it was described in 1885 based on a single female! I found one of them myself on my first visit to the spot and hoped to collect wood to rear more. This was not to be (the ebony wood was just too old now), but several batches from other types of plants were collected. The most interesting of these were living stems of Lycium berlandieri—I noticed beetle emergence holes at the base of the stems, and as I began cutting the stems to collect them I found an adult cerambycid beetle running rapidly on the stem. It was not one I had seen before, but its size matched that of the emergence holes and led me to believe it was the beetle causing the holes. This was confirmed later in the season when additional adults of this beetle emerged from the stems inside their rearing container. They proved to be *Neoclytus augusti*, a Mexican species known in the U.S. only from the LRGV. The record not only represented a new larval host, but it also extended the known distribution of the beetle further up the Rio Grande River.

The area also produced a few new birds for the trip, including a couple of southwestern U.S. specialties; the cousin of the familiar cardinal, the pyrrhuloxia. Easterners accustomed to only a single species of thrasher, the brown thrasher, are always interested in catching glimpses of some of the seven thrasher species found in the West.

Here we spotted one of them, the curve-billed thrasher. Two overwintering or possibly migrating species of sparrows (depending on the time of year) were present, the vesper and clay-colored sparrows, and a single, wayward palm warbler was present. This latter species is typically found further to the east. A few Swainson's hawks and a separate group of 40 American pelicans leisurely headed north soaring on thermals. As we loaded the wood batches in the vehicle and prepared to leave, we noticed a dead horned lizard on the ground nearby. It was a large beautiful specimen in perfect shape except for slight crushing of the left hindquarter—possibly the lizard was run over by a vehicle and died *in situ*, or the damage could have occurred post mortem. At any rate, it was a treat to examine up close this classic example of southwestern fauna.

At the park itself, we hiked along a nature trail that courses through beautiful upland chaparral habitat along the north side of the lake. Signs along the trail give names for many of the plants, helping the observer to truly appreciate the floral diversity that once existed across the overgrazed plains surrounding the park. Insect activity was much less than we had seen in the LRGV, although tiger beetles (later identified as *Cicindela ocellata rectilatera*) were encountered commonly along the road near the trailhead. This species proved to be rather challenging to collect—the rocky ground made it difficult to get a good "seal" around the rim of the insect net after slamming it over the specimen, creating openings under the net rim to which the adults would dart and then fly to safety. One specimen of a rare buprestid, *Chrysobothris ephedrae vogti*, was encountered sitting on a dead branch of palo verde (*Parkinsonia texana*). No hosts have been recorded yet for this subspecies, but since the nominate form occurring further west is known to breed in ephedra (*Ephedra* spp.) this likely represents only an incidental association. Nevertheless, I collected the wood to see what would emerge and added it to the now sizeable pile of dead wood growing inside the vehicle. The heat of the afternoon stifled most bird activity, although an Altamira oriole braved the heat to sing atop one of the taller trees.

We left the park around 4:00 pm, and it would take the rest of the day and well into the evening to arrive in Del Rio some 260 miles to the northwest. Little public land exists beween Falcon Lake and Del Rio, but access to the river and a variety of habitats can be found just west of Del Rio. The largest public area is nearby Amistad Lake, a national recreational area, but we set our sights on a small state park further west called Seminole Canyon. The park borders the Pecos River and is primarily of historical interest—Native American hieroglyphics can be found on the steep canyon walls rising far above the river. Public access to the main canyon is prohibited in the interest of protecting the hieroglyphics; however, the deep cut ravines leading into the canyon are not off limits. These ravines were of particular interest because of the woody plants occurring in them, primarily vasey oak (*Quercus pungens* var. *vaseyana*), blackbrush acacia (*Acacia rigidula*) and texas persimmon (*Diospyros texana*). This is in stark contrast to the vast treeless plains above the canyon. We hiked close to a mile before reaching the upper limits of one of these ravines. As we began descending into the ravine, I noticed clumps of sotol (*Dasylirion wheeleri*—Family Liliaceae), the only host plant for a beautiful genus of buprestids called *Thrincopyge*. Two species occur in west Texas—*T. alacris* is bright yellow with brilliant blue or blue-green blotches on top,

while *T. ambiens* is brilliant green with yellow around the margin of the body. Looking for the adult beetles is a challenge as they secrete themselves within the basal rosette between the tightly apressed bases of the long, strap-like leaves. To find them one must separate the leaves, taking care to avoid the sharp, recurved spines along their edges, and peer down into the rosette. Long forceps for reaching down into the rosette are a must if one wishes to collect the adults, and even then the collector is almost always rewarded also with cuts to the hands. I had seen both species previously in the Big Bend area but didn't know if they occurred this far east or if the adults would be out this early in the season. We began peering into the plants and soon found one adult *T. ambiens* sitting within the rosette. This would be the only adult seen on the day—probably we were at the beginning of the emergence period—but we now knew that at least one of the species occurs here.

As I worked my way further into the ravine, I began to see the wood plants I had hoped to encounter. Of course, finding trees is one thing—finding recently dead wood infested with beetles is another! Dead wood abounds in the arid southwest, with its unpredictable moisture availability and consequent dieback and regrowth, and the prolonged dry periods slow the breakdown of dead wood. I chopped into a few miscellaneous dead branches I found but didn't see much. Eventually I found a vasey oak clump with a mixture of live and dead trunks and branches—perfect conditions for wood borers. As I chopped into one of the dead trunk sections I began to find evidence of fresh larval galleries. I followed the galleries, chipping away carefully and deliberately, and soon encountered a freshly-transformed adult of *Spectralia ruburella*. Like its congener that we encountered in the LRGV (*S. prosternalis*), this attractive species is very uncommonly collected, and larval hosts were completely unknown—until now. I had looked for this species many times before in west Texas without success, so it was gratifying to not only find it, but to also discover the larval host. More chopping into the wood turned up a large larva of what I presumed also to be this species, so I bundled up a healthy sampling of the wood and carried it back to the vehicle. Only one additional adult has emerged from this wood so far, but more could possibly emerge over the next year or two.

Despite the desolation of the habitat, there was quite a bit of bird activity before thick clouds moved in and the winds picked up, causing everything (including us) to look for cover. We were into the range of the ash-throated flycatcher—the most widespread *Myiarchus* of the West, where it is typical of open, arid habitats in contrast to our forest-dwelling great crested flycatcher. A resident Cassin's Sparrow sang in flight as a black-tailed gnatcatcher worked it's way through the scrub. There were more overwintering sparrows here in addition to the previously mentioned clay-colored and vesper sparrows, including white-crowned and lark sparrows. As we climbed down into a well-vegetated canyon we had our first encounters with the canyon wren and Bell's vireo.

The drive to Big Bend National Park takes one through some of the most desolate parts of west Texas. We made it west into Marathon—a charming little "old west" town where we enjoyed a home-cooked meal—and then turned south for the 100+ mile drive to the park office. We would be staying in researchers bunk housing, and I had made

arrangements with park officials to leave the key in the mailbox for our late arrival. When we got there, however, there was no key—and nobody there! We had brought our sleeping bags, but it was a cold blustery evening and the thought of going up in elevation to the campground in the Chisos Mountains Basin was almost out of the question. We ended up finding the security office and knocking on the window to get the attention of the dispatcher, who was able to locate a ranger that could unlock the bunk house for us. The forty-mile drive to the bunk house took another hour or so on park roads. As we drove, the car lights illuminated desert shrubs whipping violently in the gusty winds, creating an almost surreal experience. We were pleasantly surprised, however, upon arriving at the bunk house to find that it was actually a small house—formerly an officer's quarters, and it was ours alone for only $7.20 per night!

Big Bend National Park is the largest national park in the contiguous 48 states. Its Nearly 1 million acres encompass an incredible diversity of landforms, ranging from desert scrub at lower elevations to sotol grasslands in the Chisos mountains foothill, oak/juniper woodland in middle elevations, and pine forest at the highest elevations. Riparian habitats border the Rio Grande River, which are most easily accessed at Rio Grande Village to the east and Castolon to the west. At the center of the park, the Chisos Mountains rise nearly 8,000 feet out of the Chihuahuan desert below, dominating the landscape and providing spectacular vistas from numerous vantage points around its rim. Even in the middle of summer, a quick drive up into the central basin provides cool and welcome respite from the searing desert heat below. I first visited big Bend in 1994 and had made several trips there since then as part of a long term study to more fully characterize its wood boring beetle fauna. New species of insects, including wood boring beetles, continue to be described from the park on a regular basis, and my studies alone had turned up a number of species not previously recorded from the park. This was my first visit to Big Bend during the early part of the season, and I looked forward to the idea of collecting in the park during a time of that season not well sampled by insect collectors.

We spent the first day on the east side of the park (vicinity Rio Grande Village), where several trails would allow us to visit both riparian as well as low desert habitats. But first, we hiked the short trail to Boquillas Canyon, a spectacular narrow-walled gorge cut by the Rio Grande River as it turns back north. Almost immediately I located several dead retama (*Parkinsonia aculeate*) trees—chopping into the wood revealed several buprestid larvae and one adult in the genus *Acmaeodera*. Success already! A few other batches of wood were collected, but this hike was mostly a sight-seeing trip into the canyon—eventually we could go no further as the river converged against the towering canyon wall. It was here that we heard the song of Bell's vireo, which we continued to hear anytime we neared clumps of Gooding willow (*Salix gooddingii*) along the river. Afterwards, we spent some time in the campground at Rio Grande Village before hiking a trail into low desert. A brilliant vermillion flycatcher was seen sallying for insects, as a family of peccaries lumbered along the edge of the campground. A few warblers, including Wilson's warbler, darted among the thickets indicating that warbler migration was under way. As we hiked over a ridge and into the low desert, we heard the descending trickle of song notes that so typically graces the walls of western canyons—

the song of the canyon wren. Coming out onto a low outcrop above the river, we had a chance to see one of the little birds as it flitted among some nearby shrubs and then perched on the rocks of the adjacent outcropping. Few adult beetles were seen on plants, however, and infested wood was equally scarce—with the significant exception of a large, uprooted Goodding willow tree lying on the river bank. Wilting leaves were present on some of its branches, suggesting it had recently been washed to its current location by the river during a flood. At the base of the trunk where the main roots projected, I noticed what appeared to be frass (the sawdust that wood boring beetle larvae eject after eating it) under the edge of bark at the live/dead wood interface. I used my knife to cut away some of the bark and immediately encountered a huge buprestid larvae. Its enormous size meant that it could only be one of a few species, such as *Polycesta deserticola*, *Gyascutus planicosta*, or two species of *Lampetis*. The first breeds commonly in oak but is also known from willow—but only in dead branches. Larvae of *G. planicosta* are apparently restricted to the living roots of *Atriplex* and a few other asteraceous shrubs, making it also an unlikely choice. The larva of the two *Lampetis* species, on the other hand, have never been found. As I continued digging into the wood, I noticed fragments of a dead adult beetle within the galleries. The largest fragment, the base of an elytron (wing cover), was brilliant blue/green in color, identical to those of *Lampetis*! I removed the larvae from their galleries and placed them individually in vials with pieces of the host wood, knowing there was little chance either would complete its development. Both did eventually die, but they were preserved and photographs have been sent to Mark Volkovitsh (Russian Academy of Sciences, St. Petersburg) who is perhaps the world's leading expert in larval buprestid taxonomy. He reported back that the larvae do appear to represent Lampetis, based on their resemblance to larvae of a Euasian species in the genus, and the fragments I found with them provide further evidence of such. If true, the fact that the larvae apparently feed under the bark of living trees below the soil line would certainly explain why such a large, conspicuous and commonly encountered species has never before been reared.

The morning of Day 2 was spent in the lower elevations of Lone Pine Canyon outside the eastern flank of the Chisos Mountains. The opening into the canyon features high desert scrub and a dry wash along the north side dominated by woody plants such as texas persimmon, whitethorn acacia (*Acacia constricta*), and ephedra. Dead, apparently infected branches of each if these plants were found and collected, but the most exciting find were dead stems of shrubby coldenia (*Tiquilia canescens*). A colleague in California had recently reared a new species in the very rare and unusual buprestid genus *Trichinorhipis* from dead stems of this plant he had collected in the nearby town of Terlingua. I bundled up a rather substantial batch of dead stems from this plant, and although nothing has yet emerged, I am willing to wait—it took seven years for the beetles to emerge from the original batch of wood!. We considered going further up into Lone Pine Canyon, where sotol grassland transitioning to oak/juniper woodland can be found. These areas, however, are only accessible after several miles of rough 2-track and another mile or so of foot trails (I learned this hard lesson during my 2003 trip). We knew we would find similar habitats tomorrow when we visited the much more accessible Green Gulch Canyon, so we decided to explore the higher elevations in the

(Cont'd, page 14)

Chisos Mountains. As we made our way back to the main road, we had our only rattlesnake experience of the trip—a Mojave rattler stopped in the middle of the road.

The Chisos mountains were formed as a result of magma intrusion below the surface~35 million years ago followed by subsequent cooling and exposure through erosion. The peaks of the outer rim, reaching upwards of 7,000 feet in elevation, tower above a large central basin lying at 5,400 feet. Oak/juniper woodland dominates the central basin and lower flanks, with several species of oak (vasey oak, gray oak—*Quercus grisea*, emory oak—*Q. emoryi*), evergreen sumac (*Rhus choriophylla*), alligator and weeping junipers (*Juniperus deppeana* and *J. flaccida*), pinyon pine (*Pinus cembroides*), and mountain mahogany (*Cercocarpus betuloides* var. *montanus*) being the dominant woody plants. Elements of the desert below (e.g., whitehorn acacia) can also be found within the basin, while more boreal species such as ponderosa pine (*Pinus ponderosa*) occur near the peaks. A well developed trail system provides access to many areas within the basin and around the rim, and the scenery found here is some of the most spectacular that I have encountered in all of my travels! Despite the many trails within the basin that I have not yet hiked, I always return to the Window Trail. Unlike the other trails, which ascend various peaks around the rim, the Window Trail descends to the lowest part of the basin, where a "window" through towering granite cliffs provides a spectacular vista of the vast desert lying several thousand feet below on the west side of the Chisos Mountains. I had previously collected wood for rearing along this trail in 2001 (resulting in several new host records), so on this trip I concentrated on sampling plant species not previously collected. We were entertained for a while by a huge, black darkling beetle (*Eleodes* sp., family Tenebrionidae) as it walked across the trail—beetles in this genus characteristically hold their "butt" up in the air as they walk, and disturbing them causes them to pause with their butt held even higher as they discharge a noxious smelling liquid from glands on their body. We also found some cactus beetles (*Moneilema armatum*, family Cerambycidae) clinging to the spiny stems of cholla cactus (*Opuntia lindheimeri*) – the shiny, black adults are easily overlooked despite their large size because of their resemblance to the black lumpy masses of hardened exudates that accumulate at any wound site on the cactus.

The varied habitat also gave us the opportunity to spot many different species of birds, including rufous-crowned sparrows, Say's phoebe, spotted and canyon towhees, an overwintering Lincoln's sparrow, hermit thrush, and a pair of bushtits building a nest. Varied buntings, a bird that just barely ranges into the U. S. in Texas and Arizona, were also spotted. The most memorable avian encounter was a pair of Mexiccan jays, another southwestern U. S. specialty that, in Texas, occurs only in Big Bend. Watching them sitting on a low branch not more than 15 feet away from us through the binoculars provided stunning close up views as they looked about, chirping ever so softly. The moment provided a beautiful contrast to the raucous, shrieking encounters we had experienced with the same species earlier in the day.

The following day we returned to the Basin Road to explore the sotol grasslands and oak/juniper transition in Green Gulch Canyon. Almost immediately we encountered both species of *Thrincopyge*. Unlike at Seminole Canyon State Park, however, the beetles were out in numbers, so Chris was able to collect some for the first time while I cut a few

of the dead flowering stalks in which the larvae feed. A half-dead gray oak also caught my attention, so I started working it over with my hatchet while Chris hiked deeper into the canyon. He approached a nearby ravine and soon heard the song of a bird that he knew must be the black-capped vireo. This endangered species was high on Chris's 'wish list' of birds to see on the trip, so he was delighted when it continued to work its way down the ravine until it was directly in front of him, offering lovely looks. The endangered status of the black-capped vireo is due to its requirement of mid-successional habitat which has become more scarce as a result of fire suppression. It has also suffered from nest parasitism by the brown-headed cowbird. Meanwhile I was working over the dead branches on the gray oak and encountered buprestid larvae of what surely represent *Dicerca roburella*—the same species I first found in vasey oak a Seminole Canyon. No adults emerged from the wood during summer; however, I will be keeping all of the wood batches through this next summer in the hopes of rearing additional species that may require more time to complete their development.

Afterward we returned to the Chisos Basin and hiked the Lost Mine Trail. This spectacular trail ascends the face of Lost Mine Peak, one of three peaks along the eastern portion of the Basin Rim. Little infested wood was found during the ascent, but a nice diversity of birds was seen, including a black-chinned sparrow and a Carolina wren. A spotted towhee rustled obliviously through the leaf litter under a bush while we watched with binoculars. At the summit we found a standing dead pinyon pine infested with larvae of the buprestid *Buprestis parmaculativentris*. This species is known only from the Chisos Basin, and I had confirmed it as breeding in pinyon pine on my first visit to the park by chopping out a single, dead adult from a fallen log. I envisioned rearing a nice series as we cut up some of the branches, but so far only a single adult has emerged from the wood. Like *Dicerca roburella* in oak, I will have another chance to rear more during the upcoming summer, since some individuals may take several years to complete their development. The harsh, exposed habitat at the summit was hospitable to only the hardiest of bird species, such as the rock wren on the boulders below us. White throated swifts and violet-green swallows twittered overhead.

As we sat on the granite boulders we began to admire the stunning landscape before us. To the west in front of us was a precipitous drop into a deep canyon that rose on the other side to the 7,825 ft. Emory Peak (the park's highest). Behind us to the east the terrain dropped down into the upper reaches of Pine Canyon (the lower portion of which we had explored the previous morning). To the northwest we could look down not only into the Basin, but through the "Window" and out onto the western desert far below. Finally, to the south, the vast low desert extending all the way to the Rio Grande River where it flowed along the bottom of a massive mountain range on the Mexican side. On the west side of that range, we could see the towering, narrow walls of Santa Elena Canyon, carved over the millennia by the scouring action of the river as the mountains slowly lifted beneath it. The moment was surreal—quiet, yet bursting with the sounds of nature and wind. A common raven circled high overhead, too distant to hear but at the same time seemingly a part of the sounds around us. I've been awed by nature's majesty on many occasions, but few moments have come close to the perfection of this one. As I sat there, I made a conscious effort to etch every detail of the experience in my mind--I

BIRDS & BUGS: A NEXUS IN TEXAS (part 2) – Cont'd from p. 10

enjoy at least some of what I felt every time I recall the moment. Such moments cannot last forever, though—the day was slipping away, and we knew we had to start back down the mountain if we were to make it to the lodge while dinner was still being served. We did see a few more interesting birds, most notably a black-chinned sparrow, on the hike back down the mountain—made all the more difficult from carrying the load of ponderosa pine cut at the summit.

The next day we were to leave the park and travel north towards the Davis Mountains. Before we left, however, we wanted to see Santa Elena Canyon up close. A narrow, rocky trail went about half a mile into the canyon before stopping where the river met the sheer canyon walls. A Carolina wren was seen flitting through the introduced salt-cedar (*Tamarisk* sp.) growing along the river's edge. I even managed to identify another call as that of a vireo—moments later the Bell's vireo was spotted in a mesquite tree next to the canyon wall. Not bad for a veteran, focused beetle collector! We added a few more interesting birds to our park tally in a small interpretive trail next to the park headquarters as we dropped off the key to our bunk house—ladder-backed woodpecker, black-throated sparrow, and lesser goldfinch visited the feeders nearby, while a cactus wren flitted through the trees along the trail.

(Cont'd and concluded next month)

BLUEBIRD BOXES NEEDED – Jim Ziebol

Attention WGNSS members who are woodworkers, and all others who are interested in our Missouri State Bird. Shaw Nature Reserve is seeking nesting boxes (with either a side or top that opens) for an ongoing Bluebird breeding project. If you can build or buy a box, or make a monetary contribution (make checks payable to WGNSS/Bluebird Project and mail to Randy Korotev, 800 Oakbrook, St. Louis, MO 63132), we would appreciate your support of this project. A collection site for the boxes will be announced at a later time.

We are all well aware of the thousands of Bluebirds, Tree Swallows, Barn Swallows and Chickadees fledged in the 200+ boxes on Pete Winter's 2,600-acre ranch. His project, "Bluebirds Forever," began in 1994. In his book *Dawn Chorus: the Adventures of a Bird watcher*, Pete Winter stated that the Eastern Bluebird is his favorite bird. Pete Winter, a long-time WGNSS member, is renowned for having seen 7,700 bird species over the world.

OCTOBER BIRD REPORT - Jim Ziebol & Yvonne Homeyer

Introduction: Hurricane Wilma held together as a storm all the way into the Maritime provinces of Canada. Reportedly, many seabirds (Frigatebirds, gulls and terns) and some landbirds (including thousands of Chimney Swifts, hundreds of Yellow-billed Cuckoos and other swallow species) got swept up and were pushed into Nova Scotia. The seabirds will easily make it back to their home territories but the outlook for the landbirds is dire. Since there are no flying insects at this time of year, most of the swifts and swallows will perish and it will be very difficult for the cuckoos. Chimney Swifts were also found at

(Cont'd, next page)