NATURE NOTES MAILING PARTY LUNCHEON

At the November Board Meeting Mike Flieg recommended that the Nature Notes Mailing Party be recognized in some manner for its faithful service in preparing monthly issues for mailing, a sizeable job since about 400 issues are mailed each month. He recommended a luncheon. His suggestion was enthusiastically endorsed by the Board. Not one to let grass grow under her feet, Marjorie quickly scheduled a luncheon at a nearby Sweet Tomatoes restaurant. As member of the Mailing Party, I was privileged to along, with Betty. Not all of the mailing party were able to attend, but those who did dug in with gusto. I saw one member (who shall be nameless) pile her plate high three times. (This is an all you can eat place.)

Members of the mailing party (during the past year) have included: Betty Adams, Jim Adams, Rose Ann Bodman, Jackie Chain, Missy Chouteau, Jean Cook, Cal Darigo, Pat Diener, Barbara Elftman, Vivian Liddell, John Loomis, Pat McCormick, Ginnie Young, and (of course), Marjorie Richardson. I attend the mailing parties so that I can have face to face contact with Marjorie and/or help out if questions arise. I've been impressed with the efficiency of the group. It's no small job to handle such a large mailing. And Marjorie has given me some valuable suggestions concerning format, which were very much appreciated. - Jim Adams

BIRDS & BIRDS: A Nexus in Texas (part 3)
By Ted C. MacRae & Christopher R. Brown

...continued from the December 2005 issue of *Nature Notes*.

The drive north towards Alpine and the Davis Mountains passes through barren desert habitat with little woody vegetation, save for a couple of roadside picnic areas along the way. At the first of these were some large soapberry (*Sapindus saponaria* var. *drummondii*) trees – the only host for several uncommonly encountered buprestids – under which I gathered whatever fallen branches I could find. Although a nice series of *Agrilus ilmpiae* did emerge from the wood, none of the really uncommon species (e.g., *Agrilus sapindi* were reared). We watched another vermillion flycatcher here also, at much closer distance than at Rio Grande Village. As we approached another picnic area we saw some wind-thrown branches under a large gray oak tree. I spent my time collecting a sampling of this wood -- this proved worthwhile, as later in the summer one specimen of *Chrysobothris axillaris* emerged from one of the branches. This uncommonly collected species has been breed from a few species of oak, but gray oak is one of several previously unrecorded oak species I've now reared the beetle from. I also found a nearly complete javelina mandible (missing only a few front teeth) for my bone collection. We then completed the drive to Ft. Davis and looked forward to exploring the Davis Mountains for our final day in the field.

Faunistically, the Davis Mountains are unmistakably western. However, they form an enclave for a number of beetle species (and I suspect other insect groups as well) more

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commonly encountered in the eastern U.S. The vast expanse of desert between the Davis Mountains and forested regions of the eastern United States has resulted in disjunct populations – some of which have recently been determined to be specifically distinct from their eastern relatives. Floristically, the Davis Mountains are similar to the oak/juniper woodland habitats encountered in the Chisos Mountains of Big Bend National Park, with gray oak, vasey oak, emory oak, alligator juniper, and pinyon pine being the dominant trees. Land in the Davis Mountains is almost all privately owned, thus, access for natural history study can be limited. However, good examples of pristine habitat are accessible to the public at Davis Mountains State Park – much of it in the Limpia Canyon Primitive Area. There are several roadside parks where I have had good collecting success in past visits. One of these, located about 11 miles west of Ft. Davis on the southern edge of the Davis Mountains, was destination number one! On a previous visit to this spot in 2001, I had collected a dead branch of vasey oak, from which a small black beetle had emerged the following spring. It was a buprestid, and I recognized it instantly as belonging to the genus *Mastogenius*. Being unaware of any species of this genus known from west Texas, I immediately began comparing it to the species I had in my collection and published descriptions for those I did not have. It did not match anything – I had discovered a new species! The beetle was described later that year by Dr. Charles Bellamy (California Department of Food and Agriculture), who was revising the genus in North America and named it *Mastogenius texanus*. Unfortunately, no additional specimens emerged from the wood, and my single specimen had been deposited as the holotype for the species in the collection at the California Academy of Sciences (it is always best to deposit primary type specimens in a public museum). Thus, I was anxious to try to recollect this species. We arrived at the roadside park first thing in the morning, and I began to look at the vasey oak trees. There were a number of dead branches within reach, and since my specimen had emerged during April I decided to get out the beating sheet and see if anything was out before I started collecting branches for rearing. I gave one branch a whack, looked on the sheet, and there sat two *M. texanus* adults! After popping them into a vial, I gave another branch a whack, looked on the sheet, and there sat two more adults! Woah – I had just quintupled the number of known specimens of the species with just two whacks of a stick! I called Chris over to tell him what I had just found, and the two of us proceeded to collect ~60 adult specimens during the next hour. The adults were mostly on small, dead branches on living trees and with bark still attached (more recently dead). I was elated to have found the species, and finding such good numbers of it would allow me to distribute male/female pairs among several colleagues who also work on this group of beetles. But believe it or not, this was <u>not</u> the big success of the day! I went back to the trees from which I had beaten many of the beetles and cut off some of the dead branches. I planned to bring them back for rearing, but before bundling them up I inspected them and found holes that looked to be of the right size and shape to be emergence holes for the beetle. I started splitting the wood and immediately encountered what were obviously the larvae. I let out a big yell! Why? Because until now, no larvae of any species in the entire tribe to which this genus belongs had been discovered. Moreover, the placement of this tribe of beetles within the family, more so than any other, has long been problematic. Discovering the larva of one of its species is sure to yield

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valuable morphological characters that will help clarify the systematic relationships of this tribe within the family. For the taxonomist, this is like striking gold! I managed to collect and preserve several perfect larvae – some of these have since been sent to Dr. Volkovitsh in St. Petersburg (Russia) who will be coauthoring a paper with me to describe the larva and comment on how it impacts the higher classification of the family. The euphoric success we felt after this discovery was magnified by some excellent bird sightings at the same location. The striking yellow and black oriole of the southwest – Scott's oriole – was seen in the very trees from which we collected *M. texanus*. And one of the last birds of the trip turned out to be one of the best. We had been intently scanning groups of vultures for zone-tailed hawk for the entire trip, and it wasn't until this morning that a zone-tailed hawk appeared overhead among a few turkey vultures and offered wonderful looks. It was hard to imagine we would have had such spectacular success on our final day in the field – both bugging and birding – and it put is in a grand mood as we headed towards Limpia Canyon in Davis Mountains State Park as our final trip destination. The first question in my mind was obvious – would we find *M. texanus* at this locality also. That question was answered quickly, as I soon beat one adult from the dead branch of a vasey oak. That would be the only specimen we found, however, and is a perfect example of how a species can be abundant at one locality, yet scarce at a nearby locality despite the presence of suitable hosts, etc. There is still so much we don't know! The only other beetles we encountered were a few *Acmaeodera conoidea* – like closely related species in other parts of the country (*A. neoneglecta* in the LRGV and *A. tubulus* here in Missouri), this species signifies early season and is among the first buprestid species to emerge. We finished up with more wood collecting – vasey oak, of course, along with cat-claw (*Acacia greggii*) and blackbrush acacias, which are always promising hosts for buprestids and cerambycids. Our final collecting act of the trip occurred when we encountered a nice, clean pronghorn antelope skull – perfect except for a missing half of the mandible. The 'bone shelf' in my study at home has benefited nicely from this trip.

The drive back to St. Louis was long and tedious (as return trips always are), but it gave us the chance to savor the sights we had seen and the successes we had experienced. I had already been to most of the localities we visited (some several times), yet still saw things I had never seen before (and a few that nobody has seen before!). This, to me, is the essence of natural history study – the possibility to observe something new, the chance to advance our collective knowledge about the natural world. I have been to many places far more exotic and had trips where I've collected far greater numbers of specimens, but few of those trips compare to this one in terms of new knowledge gained. In total, I collected about 600 beetles during the trip. This really is not a high number for a 2-week field trip, which can yield two to three thousand specimens if the timing is right. But during the following summer, an additional 1,500 beetles emerged from the batches of wood we brought back with us. A significant number to be sure, but more importantly, the scientific value of these specimens far exceeds that of field-collected specimens because of the unequivocal association with their larval host plants, many of which have not previously been reported. The wood batches are being kept for one more season, and while I don't expect them to produce near as many beetles during this second season, it is certainly worthwhile to see what does emerge. In the meantime, I'm beginning to think about where to go to 'replenish' the rearing containers after this season is over!