rich canyons and valleys. The area contains the world’s only official jaguar preserve, and is a winter home for many species of North American birds.

La Sierra’s Director, Dr Peter Dunham (Associate Professor of Anthropology at CSU), has carried out research in the region. This work has shown that the area was once a rich mineral resource zone for the ancient Maya, who exploited pyrite, clay, quartz, volcanic rock and other deposits to make ceramics, spear-heads, dyes and other tools for daily use. With the help of the local Maya, Dr Dunham and his team have unearthed a rich archaeological record of more than a dozen previously unknown Mayan ruins, including temples, plazas, crop terraces and settlements. He is investigating how the Mayas impacted on the biodiversity of the region. Chris met with staff from CSU biology faculty in December to begin designing a joint ecological assessment of the La Sierra area to be conducted in spring 2002.

Like Las Cuevas, La Sierra provides researchers with cutting-edge support for fieldwork in the tropics, with archaeology, biology and geology labs and logistical support such as radios and vehicles.

“This is an extraordinary development,” said Peter Dunham. “It positions both research stations to join the ranks of the world’s leading field stations. Collaboration between the two organisations will allow us to combine our resources and elevate the calibre of our research and programming to levels that were not possible previously. It also formalises a relationship that has been developing right from the start,” Dunham added, “La Sierra was in part inspired by Las Cuevas. We’ve been coordinating our efforts with theirs and have benefited greatly from the advice, experience and support from Chris Minty and his team.”

The Museum and the University will collaborate in joint programs and will exchange faculty, students and materials in areas in which both institutions have mutual interest. Principally, we will collaborate in the following areas:

1. Joint activities and mutual assistance in field research, conservation, education, appropriate development and external collaboration.
2. Reciprocal access for faculty, students and collaborators to the field stations, each co-operating with the Government of Belize.
3. Exchange of invitations to scholars for lectures, talks and sharing of experience.
4. Exchange of publications and research materials in fields of interest to both institutions.
5. Exchange of faculty and students for fieldwork, academic tuition and study.
6. Public and scholarly promotion of joint and respective programming in the UK, USA, Belize and other arenas.

If anyone is interested in finding out more about this development please contact Chris Minty at cuervas@btl.net.

Diary of a tropical novice: The Life Science Keepers appraise Las Cuevas

Richard Bateman
The Natural History Museum

Having been Keeper of Botany (and thus ultimately responsible for Las Cuevas) for 15 months, I decided to take the radical step of abandoning the unrelenting bustle of South Kensington in order to see for myself the biodiversity treasure-chest of Belize. Fellow NHM Life Science Keepers Phil Rainbow (Zoology) and Dick Vane-Wright (Entomology) had never visited Belize either, so they kindly agreed to participate in our brief but intensive fact-finding tour, along with Station Manager Chris Minty and Scientific Leader Malcolm Penn. Detailed comparison of everyone’s diaries revealed an (astonishingly broad) week-long window in mid-February and the rest, as they say, is history:

Day One: London to Houston

Gatwick to Houston flight was characterised by non-stop Keeporial chatter on a wide range of topics (even including Las Cuevas). We were impressed by the various high-tech devices now provided on trans-Atlantic flights, but used only the in-flight telephone (a Keeper’s work is never done), having looked in vain for a means of transmitting e-mails (surely in this day and age … ?). Following Lynn’s excellent schedule implicitly, but made our first error...
Recently, I visited the Las Cuevas Research Station as part of my long-term research on the theraphosid spider (arananidae) fauna of Belize. Although my study has been ongoing for the past six years, this was my first opportunity to explore the Chiquibul forest and examine its theraphosids. My trip was funded by a grant from the American Arachnological Society and by the Memphis Zoological Society.

I prospected for tarantulas in and adjacent to the Las Cuevas Research Station from 18-21 October 2000. Two species were found; one expected and the other a surprise. As predicted, Citharacanthus meermani occurs in the area. The type locality is near Cristo Rey and I have previously examined material from Mayflower, Slate Creek Preserve, and Caraco. The Las Cuevas area is physiographically and floristically conterminous with the latter two sites, and thus it was no surprise to find C. meermani. The Las Cuevas specimens are significant in that they confirm the existence of this species deep within the Chiquibul and Vaca Plateau and thus support my contention that the two Citharacanthus species in Belize are allopatric, with C. meermani occurring to the lee of the central divide and C. livingstoni limited to the windward slopes of the Maya Mountains and adjacent foothills.

I also found Brachypelma vagans in abundance near Las Cuevas. Although B. vagans is the most wide-ranging theraphosid spider in Belize, I did not expect to find it in the Chiquibul. My previous collecting along the margins of the highlands had led me to believe that Brachypelma was replaced by Citharacanthus above 200 m elevation. I was surprised to find the species common at Las Cuevas. Throughout most of Belize, B. vagans is ubiquitous due to its preference for clearings and early successional scrub. This is an abundant habitat in the lowlands due to the presence of villages and many milpas. Because the Las Cuevas site is heavily forested and has no permanent human settlements besides the Las Cuevas staff, I found B. vagans populations concentrated in the Station yard, but scarce in the adjacent forest. In contrast, C. meermani, a species preferring well-shaded habitat, was abundant in the forest but I found only one specimen living on Station grounds. The presence of B. vagans in the Chiquibul, the last area to be sampled for theraphosids, indicates that it is found country-wide — and in this way it is unique among Belizean tarantulas.

Finding B. vagans in the highlands seems to rule out the possibility of a second Brachypelma species occurring in Belize, specifically B. sabulosum. Prior to my trip to Las Cuevas, I had suspected that the range of B. sabulosum extended eastward from Guatemalan into the Vaca Plateau in western Belize. This seemed likely because I had failed to find B. vagans above 200 m and museum records established B. sabulosum as occurring not far beyond the border in the Guatemalan Peten. The type locality of B. sabulosum is the Tikal Archaeological Site. I have not personally examined Tikal theraphosids in situ, but given the close proximity of Las Cuevas and Tikal, the physiographic homogeneity of the intervening territory, and the fact that B. vagans — not B. sabulosum — is found in the Chiquibul Reserve, I now harbor some skepticism that the B. sabulosum type material actually originated from Tikal. My path now leads to Guatemala!

During the last week of October, I made a visit to the Las Cuevas Research Station to initiate research on the mycorrhizal fungi associated with Pinus caribaea. The goal of the trip was to lay the groundwork for future work by making preliminary collections of fungi in pine forests of Belize and some preliminary investigations into how mycorrhizal fungi species are being effected by the devastation caused by the southern pine bark beetle at the Mountain Pine Ridge.

After an initial tour of LCIRS with Chris Minny and Chapal Bol, including a trip to the observation tower during which a group of spider monkeys were observed, I began a survey of fungi on Mountain Pine Ridge. During the next six days, I was able to cover much of the terrain between Douglas da Silva and the Macal River where the pine forest abruptly ends. The Mountain Pine Ridge area is covered by stands of Pinus caribaea mixed with Quercus species. The forest is, in many respects, reminiscent of pine/oak stands in North America but the Pinus caribaea forest differs by having a coniferous canopy over a distinctly tropical understory. A deep litter layer, that makes a rake an indispensable tool for finding fungi, also characterizes the forest floor. A high point of the collecting was arriving at a hilltop offering a wide view of the pine forest with the Macal River below and the Chiquibul Forest beyond.

Collecting on Mountain Pine Ridge was good and many specimens were prepared with corresponding field notes and photographs. It will take some time yet to finish up the microscopic work needed to name my collections. But, I came away with the impression that there is a remarkable similarity between the mycorrhiza associated with pines in Belize and that associated with pines in parts of the United States. One of my first collections, for example, was Lactarius salmonicolor: a distinctive species found commonly along the Gulf Coast of the US. Other examples are: Amanita flavoconia, Strobilomyces confusus, Lactarius indigo, Pisolithus arhizus, Phallus dissimulans, Suius ovatus, and Cantharellus cibarius. All are rather common elements of the North American mycoflora. As progress is made in identifying the collections, species that are endemic to the region will undoubtedly be encountered as well.

The entire trip was punctuated by many sightings of wildlife, beginning with a tapir that crossed in front of us on our way in to Las Cuevas. Other sightings included ocelleted turkeys, a fox, a brocket deer, white collared paca and scarlet macaws. Howler monkeys awakened me once or twice at night but the jaguar, which I really wanted to see, was elusive. Maybe next time? Finally, the work couldn’t have been done without the tremendous logistic support provided by Chris and his staff, in particular Enrique’s superb handling of the Land Rover and his knowledge of the maze of tracks on Mountain Pine Ridge.

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