bark beetles are also among the very most abundant insects represented
by the Museum of Comparative Zoology at Harvard University under
the direction of Dr. Brian Farrell and Edward O. Wilson has established a
long-term research study of the insect biodiversity of the Dominican
Republic. So far, thousands of specimens of ants, beetles and other insects have been
identified and, geo-referenced. An NSF supported digital imaging ini-
tiative has successfully imaged thousands of species of insect types
at the Museum of Comparative Zoology and an effort is underway
to image the insect diversity of the Dominican Republic.

Insects, especially ants and beetles are the focal point for measuring
diversity in tropical and subtropical countries around the world. Students working in the DR can obtain references, images,
classification information and now distribution patterns of insects from their home country. This data can be analyzed and used to
map important areas of endemism, conservation priorities, refugia,
and habitat destruction. This existing research and teaching col-
aboration project in the field of biodiversity is a model system for bridging technology between countries.

INTRODUCTION

HARVARD IN THE CARIBBEAN

The long history of scientific exchange between the Caribbean and the
Museum of Comparative Zoology (MCZ) at Harvard and neighboring institutions places Harvard University in a position to foster research in this important biogeographic region. The Caribbean ranks in the top
4 of 25 biodiversity hotspots designated by Conservation International
for the high proportions of endemic species. Because the Caribbean is
small relative to other hotspots, a digital encyclopedia of the species found there is within reach, complete with web pages on each species
containing high resolution photos, distribution maps and information on the biology and practical importance to humans.

Professor Brian D. Farrell of the MCZ serves as acting supervisor
and liaison. The CRC provides an assembly of personnel and equip-
ment in three database/imaging centers in the Dominican Republic
(at JBN, MNHN, PCSB), and assists these centers in achieving the
common goals: 1) Complete documentation of native and invasive insect and plant species diversity in Hispaniola via barcoding and
imaging specimens in the Dominican National Collections and
specimens newly sampled from the National Parks for the database
served on the internet at present by the MCZ; and 2) Continually
improving the standard of georeferencing and the accuracy in tax-
onomy and coverage of diversity in the database in a way consist-
tent with the grants that initiated and maintain the centers.

THE CONSORTIUM FOR BIODIVERSITY OF THE CARIBBEAN

The Consortium for Biodiversity of the Caribbean (CBC) is an informal consortium of scientists and institutions committed to
furthering knowledge of the insects and plants of Hispaniola and
the Caribbean and building the capacity of Caribbean scientists to
contribute to that knowledge. The CBC consists of the following
organizations or institutions: the Jardín Botánico Nacional (JBN), the Departamento de Entomología at the Museo Nacional de Historia Natural (MNHN),
the Fundación Ecología Punta Cana / Punta Cana Center for Sustainable Tourism and Biodiversity Laboratory (PCSB),
the Departamento de Biología at the Universidad Autónoma de Santo
Domingo, the Department of Invertebrate Systematics at the Carnegie Museum of Natural History in Pittsburgh (CMNH),
the Departamento de Entomología at the Museo de Comparative
Zoology at Harvard University (MCZ), the Department of Systematic Biology at the Smithsonian Institution (SI), and
Conservation International (CI).

OBJECTIVE

The initial objective of the Entomology Research Project is to map
all of the specimen level GIS information associated with specimens collected in the Dominican Republic and Haiti. To date, there are over
28,000 specimens in our online database (bioscaribe.org), including
insects and plants, representing several hundred localities. An equal
number of insect specimens and associated data are in process now and
more will come as our research on Hispaniola continues.

The GIS map will then use the collected coordinates to pinpoint
localities on a map. Additional attributes to be associated with these
points will include an image of the specimen, habitat and ele-
vation information and notes.

The ultimate goals for the CBC centers are to provide a complete
database of insects and plants of Hispaniola via mechanisms that
strengthen Dominican scientists and institutions, and provide docu-
mentation of best practices for use in other countries. These prac-
tices provide the mechanism for simultaneous digitization of histor-
ical and new collections in the DR, with the goal of reaching an eventual equilibrium with new acquisitions and collections. At the same
time, each of the CBC centers contributes to this effort in a way
that strengthens the personnel and institution via production of
deliverable products, such as field guides and posters, based on
specimens entered into the database. While the Dominican database
and supporting centers are currently managed by the MCZ, the goal is to eventually establish the information technology infrastructure
for serving the database on the web from the Dominican Republic,
and encourage substantial participation of additional partners or
members with the establishment of additional CBC centers in the
DR and in Haiti, Jamaica, Puerto Rico and Cuba.

FUTURE

Over the next five years, it is anticipated that this project will result in
the first near-complete online searchable atlas, together with maps
and images, of the insect fauna of any country, especially timely with today’s
focus on biodiversity hotspots and inventory of the planet’s biota.