Tell us about the Centro de Investigaciones Indígenas de Puerto Rico (CIIPR).
The Centro de Investigaciones Indígenas de Puerto Rico, Inc., (CIIPR) was founded on April 25, 1985, when its Articles of Incorporation were approved by its Board. A private research center located in Puerta de Tierra just outside of Old San Juan, the CIIPR is housed within the premises of the El Vocero/El Mundo newspapers. While operating with full access to the newspapers’ secretaries, artists, FAX and long-distance lines, process camera, computer facilities and xerox machines, the CIIPR maintains its own library, laboratory and storage facilities. It is a non-profit foundation chartered in both the United States (1986) and in the Commonwealth of Puerto Rico (1987) and is directed by Sr. Gaspar Roca with a private Board of Directors. All major projects and all initiatives within projects are first submitted to the Board.

What are the goals of the CIIPR?
The charter of the CIIPR is to investigate the contributions of native Amerindians to Puerto Rican culture history by producing both on-island archaeological excavations and off-island ethnographic expeditions to South America. The goal is to acquire artifacts and data that are studied and interpreted for dissemination at international congresses and published in international forums. The CIIPR maintains its own archaeological and ethnographic collections as well as a research library. I am resident at the CIIPR’s office during January and June-August of every year. In addition, the CIIPR employs a number of Research Associates who are also affiliated with other organizations.

The CIIPR plays a critical role in Puerto Rican archaeology with an unmatched history of independent ethnographic expeditions to the mainland of South America (Guyana and Brazil), from whence the Indians who inhabited the Caribbean came. It also has established a strong program of on-island archaeological excavations and site documentation. Thus the CIIPR is the only institution in the Caribbean dedicated to going "back to the source", to connecting the life-styles and ideologies of living South Amerindians with their extinct Taino and Pre-Taino descendants. To do so, the CIIPR combines both ethnoLOGY (the study of related living South Amerindians) and archaeology (the study of the material remains of extinct Antillean Amerindians). In the process it has maintained the most active publication program of any similar center in the Caribbean, public or private.

In this time of contract archaeology, the CIIPR is the only private center to engage in purely scientific excavation and field documentation not only on the island but in the entire Caribbean Basin. The CIIPR investigates the archaeological background of the Indians who colonized Puerto Rico via large scale stratigraphic excavations, museum collection study, rock art documentation and site survies.

The CIIPR addresses local, regional and world-wide audiences and seeks to employ cutting-edge theory, methodology and analysis. Moreover, the CIIPR first disseminates the results of these studies in the form of papers presented to local, national and international conferences. Then it oversees the publication of these and other papers in respected venues at all levels.

The first format for dissemination is publication of scholarly summary articles in the local press. Thus, in cooperation with the newspaper El Mundo, I have published a series of 24 articles in Spanish in Escenario, the Sunday Supplement, from 1998 to the present. The series systematically covers everything from the peopling of the New World by Native Americans, to the rise of Taino civilization in the Greater Antilles. This series is ongoing, has already been used in schools, and will culminate in a book, a new synthesis of Puerto Rican archaeology. To date, CIIPR-sponsored research has resulted in more publications than those generated by any institution in the Caribbean, public or private. Total CIIPR-sponsored and assisted publications, papers and theses total 157 during the past 15 years.

The CIIPR has sent its Research Associates on fully-funded study trips to other islands in the Caribbean including
Tell us about your work with the Waiwai of Guyana.

In our search for the South American roots of the Taino, we first considered their living Guianan relatives, the coastal Arawaks or Lokono. Linguistically, they are closely related to the ancient Taino but their geographical accessibility has meant that they are now largely acculturated to coastal society and thus would not make a good research population. Thus, one of the interior Carib groups, the Arawak’s traditional enemies, protected as they are from modern contact by the ramparts of the white water rivers that roar in numerous falls from the Guianan highlands, would be the best points of comparison. Through many centuries of contact, friendly and otherwise, with the Arawaks they have come to participate in the same cultural sphere and share many traits with the Arawaks. Thus, they represent our best living analogs to the Antillean Arawaks. The premise here is that you cannot appreciate the fragments of an ancient society, recovered archaeologically, without studying related living populations. The Waiwai have also resisted European cultural impact due to their extreme isolation some 300 air miles south of the coast in the forests of the upper Essequibo River and across the frontier into Brazil. Moreover, unlike many lowland groups, they had already been extensively documented by researchers of the Danish National Museum and the Smithsonian Institution in the 1950s. The modern multi-national expedition mounted by the CIIPR in 1985-86 brought researchers from England, the United States, Puerto Rico and Guyana, and included five members. It researched areas of Waiwai culture not previously investigated, new fields such as ethno-astronomy (native systems of astronomy and calendrics) and ethno-archaeology (the study of living cultures from the perspective of archaeology and its concern for artifacts and their fate), as well as documenting the significant cultural changes that had happened during the past 30 years.

Since building Caribbean-basin wide institutional connections is another goal of the CIIPR, I have made three trips to Guyana to build the joint expedition with the Roth Museum of Anthropology in the capital of Guyana, Georgetown. The CIIPR subsequently published in the Museum’s journal, The Journal of Archaeology and Anthropology, donated needed equipment to the local Indians, and made extensive collections of material objects for the Roth Museum, its own collection, and for the Waiwai themselves until such time as they might become interested in their own heritage. The joint CIIPR-Roth Expedition flew into the only Waiwai village in Guyana, Shefarimo (“Big Dog Village”), in several waves using small planes to land at one narrow jungle airstrip. The expedition lasted from the end of May 1985 until the beginning of July, 1986 and covered a total of 3,200 kilometers by commercial airliner, bush plane, canoe and chartered twin-engined plane, and cost in excess of $70,000.00. The materials brought back by the expedition included 500 soil samples to test the effect of human activity on tropical forest soils where artifacts rapidly disappear, and hundreds of artifacts in 98 different classes of material culture, from huge, hand-coiled ceramic vessels, seed beadwork aprons and necklaces, to bows and arrows, drums and other musical instruments and a vast panoply of intricate wickerwork and twill-weave baskets. This included all the baskets used in the processing of bitter manioc referred to by the ancient Caribbean chroniclers.

The expedition has produced a spate of publications and presentations including a whole issue of the Journal of Latin American Literature (1989), which I co-edited, the material for an article on the Waiwai in an edited volume on feather art published by the University of Pennsylvania Museum (1991) and the first comprehensive introduction to Amazonian native arts and crafts, my Arts of the Amazon, Thames and Hudson, 1995. The ethno-archaeological component of this project has been published by Dr. Siegel and myself in the British journal World Archaeology, 1986.

A significant result of the CIIPR's Waiwai expeditions was my translation of a new corpus of 15 myths recorded in Waiwai. These myths have given us novel insights into everything from the feather arts of this jungle society to their ethno-astronomy. Equally important were the ethno-archaeological discoveries of that led to the reconstruction of an entire ancient village (Maisabel) in Puerto Rico and the discovery of a new tribe emerging from the jungle. The latter is a rare phenomenon today, now that most South Amerindian tribes have been pacified and acculturated.

To pursue the prehistoric analogs of these lowland ethno-graphic patterns, the CIIPR has sponsored excavations and/or documentation on ten sites from the north coast to the central and southern highlands of Puerto Rico,
including those already mentioned as well as Puebloito Carmen, Guayama, Cueva de la Mora and Cueva de la Mommia in Comerío, and Tibes near Ponce. In these days of limited contract excavation it is noteworthy that the CIIPR has made the largest single excavation in all the Caribbean of an entire Indian village and its associated cemetery at the multi-component site of Maisabel in Vega Baja. A CIIPR-supported CEAปราRC field school under my direction began the excavations in 1985, locating old trenches of previous, but never published, work by the local Sebuco society, thus demonstrating the richness of the main mounds. Dr. Peter E. Siegel assumed co-Directorship of the project that year and Ms. Rosa Garcia organized a complete field lab. In 1986 another of my CEAปราRC field schools, underwritten again by the CIIPR, resumed work at the site, especially on the unique beach petroglyphs (a whole new class of rock art!) that were discovered there while the main excavations continued with Siegel assuming sole Directorship of the settlement site project. He worked with a fifteen-person professional crew until 1988 when the work shifted to a fully-equipped laboratory in Hato Rey. A whole set of multi-disciplinary experts were recruited as Research Consultants by Siegel, both in the field and in the lab. They worked to extract the maximum scientific data from the artifacts recovered. They included soil scientists, excavation consultants, ceramic consultants (including myself), artists, museum and conservation specialists, faunal and floral experts, osteologists and geologists. This cooperation resulted in an edited volume published by B.A.R. (British Archaeological Reports) and additional theses: one on faunal remains, a Masters Thesis by deFrance, (1988) and a Ph.D. thesis by Newsom (1993) on botanical remains, and monographs on the burials (Budinoff 1987, 1991).

As part of a large-scale (20 meter interval) site sampling program, the first motorized boring in the Caribbean yielded a complete picture of a circular village with central plaza, a typical South American form of settlement, but one newly documented in the Caribbean. This system of large-scale sampling of archaeological sites has since been adopted by other investigators working in Puerto Rico because it can reveal the "hidden" richness of artifacts under the soil and guide eventual excavation. Later excavations revealed the floor-plan of a large oblong communal house, the first of its kind. It is one of only four floor-plans documented in the Caribbean, and is by far the oldest. A whole population of skeletons were recovered from the burials in the plaza and now constitute the largest sample in Puerto Rico, yielding new data on everything from common pathologies, to life-span, sex ratios and nutrition (some of the skeletal material I earlier excavated for the CEAปราRC at Luquillo Beach is now the teaching property of the Department of Anthropology at the Uof D). Much new data on mortuary practices was recovered including novel patterns of offerings and the warfare between the incoming Saladoid people and the resident Ortoiroid Archaic Indians (an Archaic salt water ray dart point through the rib cage of a young, buried Saladoid male). This and other data from the CIIPR's ex-Castillo collection (a similar spine dart point through the skull of a Saladoid warrior) is revising our thinking on the "peaceful" Taino ancestors. New research by myself on carved human skull frontal bone plaques (pectoral) and decorated human long bones has documented these gruesome war "trophies" in a comparative context.

At Maisabel we employed new techniques (for the Caribbean) such as flotation to recover even minute faunal remains of meals. The spectrum of foods used by these early populations was much wider than the hitherto large bones had indicated. Many C-14 determinations obtained by the CIIPR yielded some of the earliest dates, in the 4th century B.C. for these new arrivals, pushing the date back three centuries from previous estimates. New dating techniques such as TL or Thermoluminescence were tried in the most complete field test in the Caribbean. During 1989, Siegel obtained a grant from the National Science Foundation (NSF) to conduct that test and in the process the first well-documented stratigraphic evidence was recovered that actually demonstrated the even earlier arrival of the Huecan Saladoid people on the island. This over-turns earlier models of initial Cedrosan Saladoid migration.

Yet, the CIIPR is interested in more than subsistence and settlement patterns. It also seeks to document two domains of culture even more central to Amerindian life-ways: religion and art. Thus, I have instituted a program of documentation of the unique pottery of early and late Greater Antillean Indians and an extensive rock art survey on the island of Puerto Rico. Many of the sites investigated are already known to the local archaeological community, but they have remained in the limbo of the unwritten oral tradition. Moreover, because rock art is hard to date, most professional archaeologists have avoided studying it, despite the fact that the study of both rock carvings (petroglyphs) and rock paintings (pictographs) possess distinct advantages. Unlike potsherds, which are easily moved from their original context, rock carvings are usually too big or too heavy to move so that one can be sure they had the same spatial relationships that they had in the past. Also unlike ceramic fragments, rock art designs are unbroken "cultural wholes" (not "cultural fragments") and can therefore illustrate the original complex intentions of ancient artists. Nevertheless, because they are both enigmatic and artistic, archaeologists have traditionally abandoned their study to amateurs, who speculate wildly as to their meanings and often copy them inaccurately.

The CIIPR program seeks to change this by publishing detailed descriptive and interpretative studies of these important monuments, with particular emphasis on the introduction of new field techniques that are both portable and affordable. This field technology is designed to bring a higher standard of documentation for such important art.

The CIIPR program has researched all major categories of pictographs and petroglyphs on the island: beach
petroglyphs which it documented for the first time at Maisabel Playa, Vega Baja, in 1987 on the north coast of Puerto Rico (Roe 1991); ball park petroglyphs at the famous site of Caguana, Utuado, in the west-central highlands (Roe 1993); river boulder petroglyphs at Pueblito Carmen, Guayama, southern highlands (Roe and Rivera 1995); and cave petroglyphs at La Cueva de la Mora, Comerío (Roe, Rivera and DeScioi 1995). Pictographs, although rarer, have also been studied at Cueva Espinal on Mona (Roe 1997) and at La Cueva de la Mora and Cueva de la Momia (Roe, Rivera, Byerly and Cornell 1999) in Comerío. Future research plans target the complex pictographs at La Cueva Catedral in the Camuy system of the western highlands, the study of which was pioneered by Díaz (1990, 1992).

The field techniques pioneered by the CIIPR, and now used by other investigators, are the simultaneous employment of rubbings, photographs (still and Hi8mm. video) and clear polyethylene tracings (first innovated at Maisabel Playa in 1987) to record accurately at 1:1 scale the petroglyphs and pictographs. This technique has since been widely adopted by other students of rock art.

In 1994 I initiated another on-island field archaeological project, this time documenting river boulder petroglyphs in the El Palo Petroglyph project in Pueblito Carmen, Guayama. That project continued through 1995 and involved test excavations at a nearby site to date the glyphs to Pre-Taino (Elenan) times. This project inaugurated yet another new technique that the CIIPR innovated in the Greater Antilles, latex “peels”, to accurately record a negative impression of the carvings for latter study and preservation. This project was presented at the 16th ICCA in Guadeloupe (1995) and recently published (Roe and Rivera 1999).

Beginning in 1997 the CIIPR began to revolutionize cave art archaeology by utilizing a battery of portable electronic altimeters, GPS units and electronic compasses. They locate the rock art assemblages on USGS topographic maps while laser levels and laser electronic rangefinders determine distances within caves and establish level grid lines. The result was the first planometric mapping of a cave floor and associated rock art. That was done at La Mora from 1997-1998, accurately locating the assemblages of both pictographs and petroglyphs. The study of La Cueva de la Mora was presented at the Bahamas conference of the ICCA in 1997 and during 1999 another CIIPR expedition to a nearby cave, La Cueva de la Momia, utilized a refined field technology based on new portable electronic instruments (a fabricated laser transit) to present the first topographic map of a cave in Puerto Rico with its associated rock art at the 18th ICCA in Grenada. Allied rock art research by CIIPR Research Associate, José Rivera, at the Cueva el Seto in Cayey, was also supported at that conference (1999) and at Guadeloupe (Rivera and Ortíz 1995, 1999).

The goal of this program of rock art documentation is to establish a corpus of accurate renderings of rock art done at 1:1 scale for the major sites on the island. This allows a componental analysis of the major components of forms (motifs) that are present within the corpus, published in 1987, as well as a grammatical analysis of the recombination of those motifs to generate expectable images. The resulting catalogs and inventories allow for a definition of stylistic provinces within the island, perhaps mirroring the ones already established by ceramic analysis. The growing corpus allows us to use both ethnographic analogy with related lowland South Amerindian groups and ethnohistorical work with the Cronistas, or early chroniclers of the Caribbean including Pané (1498?), to tease out the possible symbolic meanings behind these ancient sacred images.

The careful mapping of co-occurring rock art also allows us to establish the interrelationships of pictographs and petroglyphs, such as our discovery in Mora of the structural equation, peripheral small and simple petroglyphs:guardian figures::central large and complex pictographs:central cult images. Thus, for the first time, we have a functional “division of labor” between genres, particularly when they appear together. We have explored both the roles of petroglyphs in “social marking” at Maisabel Playa, where they apparently struck a claim to valued subsistence resources such as fishing stations, and as “narrative scenes”, true “friezes”, that exactly duplicated lowland South Amerindian myths such as the myth of the “Sun’s Fish Wier” at Maisable Playa in 1987.

During 1989 CIIPR funding allowed me to expand the Maisabel petroglyph survey to the most famous Puerto Rican petroglyphs of them all, the huge stela-like petroglyphs at the Indian Ball Park at Utuado, Caguana. This work continued through 1990. The major monoliths at the site’s main Ball Park were documented with photographs, rubbings and clear polyethylene tracings. A break-through in iconographic interpretation of the famous Frog Woman (in her local manifestation as the Earth Goddess Attabeira) indicated that many of the apparently isolated figures actually formed a story-telling frieze accurately illustrating Guianan (not Mesoamerican, as had been previously suggested) mythology. This finding established the South American rather than Central American origin of the Ball Game complex.

The correct renditions of “decorative” details within the petroglyphs also permitted the recognition of “cross-media isomorphisms” between major genres of material culture within the same culture, such as similar motifs executed in both ceramic incision and stone carving (Roe 1991). They highlight the communicative “redundancy” and centrality of the unique Taino and Pre-Taino styles. The CIIPR has also investigated the “mortuary contexts” of river boulder
and cave petroglyphs and pictographs as links to the ancestors (via the "wrapped ancestral figures" of Pueblito Carmen and La Mora which were traditionally mislabeled as "swaddled infants"). Specific symbolic linkages to the shaman in the pictographs of far-flung caves (Cueva Espinal, Mona/Cueva Catedral, Camuy) establish him as the sacred intermediary between worshipper-descendants and their ancestors within the context of native American concepts of fertility.

The CIIPR-sponsored establishment of an accurate corpus has very "real world" applications as it makes it easier to authenticate rock art, identifying modern "bogus" petroglyphs and pictographs from the originals (at Cueva de la Momia in Camerío in 1999). This is very important given the pervasive vandalization of rock art on the island.

Lastly, the temporal aspect of rock art has been explored via the first seriation, or relative chronology, of petroglyphs in the Caribbean (Roe and Rivera 1995). It is based on both local stratigraphy and the placement and evolution of motifs over time. A careful examination of the three phases within this seriation shows clear conceptual (in the dynamic dualism of the representations, c.f., Roe 1995b) and stylistic continuity from the earliest Saladoid migrants by demonstrating the importation of early devices from ceramic (and probably body) painting to later rock painting and incising.

**What are your plans for the future?**

My current plans are to strengthen the ties between the CIIPR and the University of Delaware, particularly in providing funded avenues for the latter's undergraduates to engage in sponsored field work in an international setting within a Latin American culture. All the University of Delaware students I have selected for CIIPR matching grants had to have some competence in Spanish and all have been provided by the CIIPR with the opportunity to live with a monolingual Spanish-speaking host family in the center of the island where the student can do some cultural anthropology in addition to archaeology.