

SECTION 1. TECHNICAL PROPOSAL SUBMISSION FORM



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May 3, 2006

Dr. Ivan Valdespino
Director IABIN Secretariat
Ciudada del Saber
Clayton, Republica de Panama

Dear Dr. Valdespino:

We, the undersigned, offer to provide the services for the Inter-American Pollinators Thematic Network in accordance with your Request for Proposal dated February 24, 2006 and our Proposal. We are hereby submitting our Proposal, which includes a Technical and a Financial Proposal, sealed under on an envelope and sent by e-mail to the address(es) indicated in Paragraph Reference 1.3 and 5.1.

We are submitting this proposal in association with the Co-Principal Investigators on the project: Laurie Adams, Antonio Mauro Saraiva, and Michael Ruggiero. Ms. Adams is the Executive Director of the Coevolution Institute, Dr. Saraiva is Coordinator of the Agricultural Automation Lab at the University of Sao Paulo Polytechnic School, and Dr. Michael Ruggiero is the Director of the Integrated Taxonomic Information System. We will be working in association with a number of other professionals who are listed later in this proposal.

We hereby declare that all the information and statements made in this Proposal are true and accept that any misinterpretation contained in it may lead to our disqualification.

If negotiations are held during the period of validity of the Proposal, i.e., before the date indicated in Paragraph Reference 6.1, we undertake to negotiate on the basis of the proposed staff. Our Proposal is binding upon us and subject to the modifications resulting from negotiations.

We undertake, if our Proposal is accepted, to initiate the consulting services related to the assignment not later than the date indicated in final negotiations.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,



Authorized Signature (see above) _____

Name and Title of Signatory: Laurie Davies Adams _____

Name of Firm: Coevolution Institute _____

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Abstract

Bees, bats, and hummingbirds are the most important pollinators of wild and cultivated plants in the Western Hemisphere. An electronic database of pollinating species is needed as a linking element to facilitate the integration of biological, ecological and agricultural information, in an efficient retrieval system. The database will eventually contain information on about 10,000 bee, 500 bat, and 300 hummingbird species.

Our goal is to develop a network of linked and integrated databases among major data sources and IABIN members that share critical content through a common set of data standards and exchange protocols. The primary content will be a dynamic and linked on-line Catalogue of Pollinators of the Western Hemisphere that includes data on (1) names (checklists) of bees, hummingbirds, bats, and other important pollinating species, (2) specimens in major collections, (3) pollinator experts, (4) pollinator-plant associations, (5) literature on pollinators, and (6) other data as available (e.g., geographic, genetic barcode, etc.).

Using an Experts Committee for oversight, we will develop standards and protocols, design and build a network architecture, and process data from major sources. Our final product will be an integrated pollinator network that links the major data and information sources of the Western Hemisphere. It will allow a user to readily find taxonomic, ecological, geographical, genetic and other information for a given pollinator species and to use this information in decision making, modeling, and other applications. We will work with other IABIN Thematic Networks to insure interoperability and establish interfaces in English, Spanish, Portuguese, and French.

Resumen

Las abejas, los murciélagos y los picaflones son los polinizadores más importantes de tanto las plantas silvestres como las cultivadas en el hemisferio occidental. Se requiere una base de datos electrónica como elemento conectivo y eficiente para facilitar la integración de la información biológica, ecológica y agrícola en un sistema eficiente de obtención de datos. La base de datos contendrá finalmente información acerca de unas 10.000 especies de abejas, 500 especies de murciélagos y unas 300 especies de picaflones.

Nuestro objetivo es desarrollar una red de bases de datos integradas e ínter ligadas entre las principales fuentes de datos y miembros de IABIN que comparten contenidos críticos a través de un conjunto común de estándares y protocolos de intercambio. El contenido principal será un Catálogo de Polinizadores del Hemisferio Occidental, dinámico y en línea que incluya datos sobre (1) nombres (listas) de abejas, picaflones, murciélagos y otras especies polinizadoras importantes, (2) especímenes en las principales colecciones, (3) expertos en polinizadores, (4) asociaciones polinizador-planta, (5) literatura sobre polinizadores, y (6) otros datos que estén disponibles, como ser aspectos geográficos o informaciones sobre código genético, entre otros .

Mediante una supervisión por parte de un comité de expertos, se desarrollarán los estándares y protocolos, se diseñará y construirá una arquitectura en red, y se procesarán los datos de las principales fuentes. El producto final será una red integrada de polinizadores que ligará los datos

principales y las fuentes de información del hemisferio occidental. Permitirá a un usuario fácilmente encontrar informaciones taxonómicas, ecológicas, geográficas, genéticas o de otra índole para una determinada especie de polinizador y usar esta información en el proceso de tomar de decisión, en el modelaje y otras aplicaciones. Se trabaará con otras redes temáticas IABIN para asegurar la interoperabilidad y establecer interfases en idiomas inglés, español, portugués y francés.

Resumo

Abelhas, morcegos e beija-flores são os mais importantes polinizadores de plantas cultivadas e nativas no hemisfério ocidental. Um banco de dados eletrônico de espécies polinizadoras é necessário como um elemento de ligação para facilitar a integração de informação biológica, ecológica e agrícola em um sistema de recuperação eficiente. O banco de dados conterà ao final informação sobre cerca de 10000 espécies de abelhas, 500 espécies de morcegos e 300 de beija-flores.

Nosso objetivo é desenvolver uma rede de bancos de dados integrados e interligados dentre as principais fontes de dados e membros da IABIN que compartilhem conteúdo crítico através de um conjunto comum de padrões e protocolos de troca de dados. O conteúdo principal será um Catalogo de Polinizadores do Hemisfério Ocidental, dinâmico, interligado e on-line, que incluirá dados de (1) nomes (listas- checklists) de abelhas, beija-flores, morcegos e outras espécies importantes de polinizadores, (2) espécimes nas coleções mais importantes, (3) especialistas em polinizadores, (4) associações planta-polinizador, (5) literatura em polinizadores, e (6) outros dados na medida da disponibilidade (ex. geográficos, código de barras genético, etc.)

Utilizando um comitê de especialistas para supervisionar, nós desenvolveremos padrões e protocolos, projetaremos e construiremos uma arquitetura de rede, e processaremos dados das fontes principais. Nosso produto final será uma rede integrada de polinizadores que interliga as principais fontes de dados e informações do hemisfério ocidental. Ela permitirá a um usuário prontamente encontrar informações taxonômicas, ecológicas, geográficas, genéticas e outras para uma dada espécie polinizadora e utilizá-las para tomada de decisão, modelagem e outras aplicações. Nós trabalharemos com outras Redes Temáticas IABIN para assegurar interoperabilidade e estabeleceremos interfaces em inglês, espanhol, português e francês.

SECTION 2. CONSULTANT'S ORGANIZATION AND EXPERIENCE

2a. Consultant's Organization

The Coevolution Institute will take the administrative lead on this project and will work with others to contribute management, communication, information technology (IT) and scientific expertise. Following are short descriptions of the primary administrative and IT institutional partners.

The **Coevolution Institute (CoE)**, a US 501(c) 3 nonprofit organization, was founded in 1997 and has built a number of programs. The Coevolution Institute's mission is to act as a catalyst for stewardship of biodiversity and as such, has built a number of programs. Of particular relevance is the North American Pollinator Protection Campaign (NAPPC) a tri-national public private partnership that forms a voluntary association of scientists, conservationists, public policy and government officials, agriculturists and private industry.

The **University of Sao Paulo** hosts the laboratories of Dr. Antonio Mauro Saraiva (Laboratory of Agricultural Automation, Polytechnic School) and of Dr. Vera Fonseca (Laboratory of Bees, Institute of Biosciences). They have collaborated to build WebBee, a network of information on the biodiversity of Brazilian bees. It integrates information on the biology of bees and their text, images and videos. It provides a single platform of Internet software for researchers and specialists to share digital content and provide materials for long distance education.

The **Centro de Referência em Informação Ambiental (CRIA)** is a not-for-profit, non-government organization. Its aim is to contribute towards a more sustainable use of Brazil's biodiversity through the dissemination of high quality information and education. CRIA's staff has been involved with structuring information online since 1985. CRIA has achieved excellent results in digitizing label data of major bee collections with the Species Link Network. CRIA also supports the Portuguese language interface to the Integrated Taxonomic Information System (ITIS). In 2002, CRIA provided support for the World Bee Checklist Workshop in Indaiatuba, Brazil.

The **National Biological Information Infrastructure (NBII)** is a broad-based, collaborative program amongst US federal, state, international, non-government, academic, and private industry partners. It provides a wide variety of tools and references to facilitate creation of and access to biological information on the Web. NBII also provides several biological information and technology training courses, has data sharing agreements in place with several US and International government and non governmental organizations, and has over 10 years experience in building large scale distributed biological information networks. NBII currently hosts the IABIN Invasives Information Network web site (an IABIN Thematic Network) and is developing its own pollinator web site in collaboration with such organizations at the Ecological Society of America (ESA). NBII is also serving as the Coordinating Institution (CI) for the IABIN I3N Thematic Network. This effort, as other IABIN efforts, relies heavily on NBII's infrastructure and significant information/geospatial expertise.

The **Integrated Taxonomic Information System (ITIS)** was established in the mid-1990s as a cooperative project among several U.S. federal agencies to improve upon and expand taxonomic data and information. Today, ITIS partners and cooperators are wide-ranging and include the U.S. Geological Survey, the Environmental Protection Agency, the Natural Resources Conservation Service, the Agricultural Research Service, the National Oceanic and Atmospheric Administration, the National Park Service, the Smithsonian Institution National Museum of Natural History, Agriculture and Ag Food Canada, Conabio (Mexico), CRIA (Brazil), Species 2000, and the Global Biodiversity Information Facility, among others. Through the cooperation of partner agencies and contributing scientists, ITIS provides a nomenclatural standard of accepted scientific names that can be used as a common vocabulary that links biological information from a variety of disciplines. ITIS and Species 2000 cooperate to annually produce the Catalogue of Life, a checklist and index of the world's species. Their goal is to complete the global checklist of 1.8 million species by 2011.

2b. Consultant's Experience

Assignment name: (Coevolution Institute) Pollinator Conservation Digital Library (PCDL)	Approx. value of the contract (in current US\$ or Euro): \$90,000 (\$30,000 plus \$60,000 match)
Country: USA Location within country: San Francisco, CA	Duration of assignment (months): 12
Name of Client: National Fish and Wildlife Foundation	Total N ^o of staff-months of the assignment: 36
Address: Washington, DC	Approx. value of the services provided by your firm under the contract (in current US\$ or Euro): \$90,000
Start date (month/year): January 2006 Completion date (month/year): December 2007	N ^o of professional staff-months provided by associated Consultants: 12
Name of associated Consultants, if any: Kevin Wolf David Sieband	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader): Laurie Davies Adams
Narrative description of Project: The PCDL is a knowledge management system to support the pollinator conservation community. The library is designed to support many kinds of content including reports, presentations, data sets, maps, photos, video, and more. Integrated with this core library are directories of people and organizations, project pages, mapping tools, a collaborative calendar, and news syndication service. The entire library is built using open source General Public Licensed software, including Plone and ZODB, and open standards such as FGDC-xml.	
Description of actual services provided by your staff within the assignment: The PCDL was requested by the Research Committee of the North American Pollinator Protection Campaign (NAPPC) which is coordinated by the Coevolution Institute (CoE). CoE took the request, polled the scientists regarding the fields they required in the database and built a proposal to develop it. We then worked with IT professionals to create a prototype which was then beta-tested and reviewed at the International NAPPC meeting. CoE solicited funding and acts as coordination entity to create the DB, enter data and disseminate information about the use of the PCDL	

Firm's Name: Coevolution Institute

Assignment name: (Coevolution Institute) Native Plant-Pollinator Bibliographic Database	Approx. value of the contract (in current US\$ or Euro): \$36,000 (\$36,000 plus \$9,000 match)
Country: USA Location within country: San Francisco, CA	Duration of assignment (months): 12
Name of Client: National Fish and Wildlife Foundation	Total N ^o of staff-months of the assignment: 48
Address: Washington, DC	Approx. value of the services provided by your firm under the contract (in current US\$ or Euro): \$50,000
Start date (month/year): January 2006 Completion date (month/year): December 2007	N ^o of professional staff-months provided by associated Consultants: 0
Name of associated Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader): Laurie Davies Adams
Narrative description of Project: The Native Plant Pollinator Database is an annotated database to provide information to land management professionals in the US Bureau of Land Management and other US Federal Agencies. The first database of its kind specifically to focus on native plant-pollinator interactions, these data are being harvested to be available in restoration, conservation and planning for the 300 million acres of publicly managed land in the BLM. The information will be transferred to the PCDL for broad dissemination after the data have been delivered to the BG-Base BLM database.	
Description of actual services provided by your staff within the assignment: CoE has researched and is producing an annotated bibliographic review on the documented pollinator interactions with native U.S. plants, either as floral visitors or effective pollinators, including 1-2 sentences with each citation. CoE is developing a searchable list by native plant species (using USDA PLANTS database nomenclature) and by pollinator taxonomic group, such as birds, bees, moths, butterflies, beetles, ants, wasps, mosquitoes, flies, or bats (using most recently accepted scientific name under the International Code of Zoological Nomenclature). CoE is also providing administrative coordination.	

Firm's Name: Coevolution Institute

Assignment name: (Coevolution Institute) North American Pollinator Protection Campaign (NAPPC)	Approx. value of the contract (in current US\$ or Euro): \$250,000
Country: USA Location within country: San Francisco, CA	Duration of assignment (months): 7 years
Name of Client: Multiple grants	Total N ^o of staff-months of the assignment: 48
Address: Washington, DC	Approx. value of the services provided by your firm under the contract (in current US\$ or Euro): \$900,000
Start date (month/year): 1999 Completion date (month/year): present	N ^o of professional staff-months provided by associated Consultants: Multiple consultants
Name of associated Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader): Laurie Davies Adams
Narrative description of Project: This is a science-based voluntary collaboration that provides opportunities for individuals and organizations to influence knowledge, awareness, and behavior. Its members come from the United States, Canada, and Mexico and include private industry, academia, government agencies, non-government organizations, and environmental groups. NAPPC currently has representatives from more than 100 organizations, agencies and institutions. A full description is found at www.napppc.org .	
Description of actual services provided by your staff within the assignment: CoE was a founding institution of NAPPC and since its inception has managed its growth and projects, both as a fiscal agent and coordinating body. NAPPC policy is determined by a multi-discipline, tri-national steering committee under the coordination of CoE. NAPPC operates in three languages across the continent to support pollinator protection and education about the importance of pollinating animals.	

Firm's Name: Coevolution Institute

Assignment name: (ITIS) Accelerating development of the Catalogue of Life	Approx. value of the contract (in current US\$ or Euro): \$240,000
Country: USA Location within country: Washington, DC	Duration of assignment (months): 36
Name of Client: Global Biodiversity Information Facility	Total N ^o of staff-months of the assignment: 60
Address: Copenhagen, Denmark	Approx. value of the services provided by your firm under the contract (in current US\$ or Euro): \$3,000,000
Start date (month/year): January 2004 Completion date (month/year): December 2007	N ^o of professional staff-months provided by associated Consultants: 3
Name of associated Consultants, if any: Dr. Michael Ruggiero	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader): Michael Ruggiero
Narrative description of Project: Increasing the content of the Species 2000 and ITIS Catalogue of Life through acceleration of ITIS throughput.	
Description of actual services provided by your staff within the assignment: Added and edited more than 120,000 names to ITIS during first two years, including world classification of bees to genus, world checklist of Colletinae (Hymenoptera: Apoidea), majority of North American and Middle American bee species, world bird checklist (including hummingbirds), and world mammal checklist (including bats).	

Firm's Name: ITIS

Assignment name: University of São Paulo WebBee – an information network on Brazilian bee biodiversity	Approx. value of the contract (in current US\$ or Euro): \$50.000
Country: Brazil Location within country: Sao Paulo, SP	Duration of assignment (months): 24
Name of Client: National Research Council - CNPq	Total N ^o of staff-months of the assignment: 80
Address: Brasilia, Brazil	Approx. value of the services provided by your firm under the contract (in current US\$ or Euro): \$70.000
Start date (month/year): December/2001 Completion date (month/year): May/2004	N ^o of professional staff-months provided by associated Consultants: 2
Name of associated Consultants, if any: Renato Cunha	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader): Antonio Mauro Saraiva Vera Lucia Imperatriz Fonseca
<p>Narrative description of Project: WebBee is an information system designed to host information on the biodiversity of Brazilian bees. It integrates information on the biology of bee species and plant-bee interactions, in text, images and videos. Real time data from field experiments such as flight activity and weather data can also be stored in the database. It provides a single platform of Internet software for researchers and specialists to share digital content and provide materials for long distance education for different audiences. It was designed and built using open or free software, such as MySQL and PHP. It also hosts the website of the Brazilian Pollinators Initiative. It can be accessed at www.webbee.org.br. Other Brazilian groups were invited to join, such as LABE – at State University of feira de Santana (Dr. Marina Castro) and Embrapa (Dr. Giorgio Venturieri) and have collaborated since then. Although the formal project with CNPq ended in 2004 when a first prototype of the system was delivered, the project has continued with resources from scholarships and other sources. A new project funded by Sao Paulo State Research Foundation has just been approved to start in May 2006.</p>	
<p>Description of actual services provided by your staff within the assignment: CNPq called for proposals on the development of Digital Content on the web. The University of Sao Paulo, through the Agricultural Automation Lab and the Bee lab wrote the proposal which was approved, then gathered the team which involved IT and Biology experts and students (undergraduate and graduate) to develop the system and its content.</p>	

Firm's Name: University of São Paulo

SECTION 3. COMMENTS AND SUGGESTIONS ON THE TERMS OF REFERENCE AND ON COUNTERPART STAFF AND FACILITIES TO BE PROVIDED BY THE CLIENT

3a. On the Terms of Reference

We believe that the Terms of Reference (TOR's) as described are thorough and balanced and see no need to modify or improve them. We will address each in the context of our technical proposal. We will emphasize building upon the existing IABIN related infrastructure, applications and lessons learned. We understand that this phase of the project will concentrate primarily upon building the distributed network. While we will rely on existing data sets to populate the system, we understand that there will be a second phase that will focus on developing content.

3b. On Counterpart Staff and Facilities

Coevolution Institute (CoE) operates its administration from its headquarters in San Francisco, with offices in Washington, DC and Vermont. CoE's San Francisco headquarters consists of a full floor of 4223 Washington, with various sub-tenants in the environmental community occupying two of the offices. The CoE headquarters is easily accessible via public transportation from all allocations in the Bay Area, as is the Maryland office in the DC area. Both offices have on-staff Spanish speakers.

CoE computers operate from a PC Windows platform through a central server with daily back-up of all data, and are capable of remote access to the common server located in SF. The CoE administrative and program staff keep daily records of project hours spent to generate monthly reports of project activities, income and expenditures. These reports are produced monthly through the Oakland based accounting firm Ghaffari Zaragoza, LLP. CoE conducts an independent audit annually which is available to the public.

The USGS Center for Biological Informatics (CBI) located in Denver, Colorado operates over 35 servers supporting various national and international biological informatics initiatives (including NBII), houses over 3 TeraBytes of biological data/information, and provides access through multiple T1/T3 network lines.

The University of Sao Paulo Agricultural Automation Lab (USP-LAA) is located in Sao Paulo city, in the main campus of USP, and is part of the Computer Engineering Department of the Polytechnic School (School of Engineering). It has and operates its own hardware and software development infrastructure and also counts on the infrastructure of the Computing Center of USP (CCE), where high capacity servers, with 24x7 operation host the University systems and many project systems, such as WebBee. A dedicated fibre optics test bed links LAA to the Bee Lab and to the Internet 2, via FAPESP (Sao Paulo State Research Foundation) KyaTera Project.

SECTION 4. Description of Approach, Methodology and Work Plan for Performing the Assignment

4a. Technical Approach and Methodology

Introduction

Bees, bats, and hummingbirds are the most important pollinators of wild and cultivated plants in the Western Hemisphere. While information on bat and hummingbird taxonomy is somewhat available, similar information on bees is scattered and unavailable. An electronic Pollinating Species Database is needed as a linking element to facilitate the integration of biological, ecological and agricultural information, in an efficient retrieval system. The Catalogue will consist of five linked databases: 1) a checklist of pollinating species, 2) a list of major collections of pollinating species, and 3) a database of pollinator experts, 4) important literature on pollinators, and 5) a list of pollinator host plants. The Catalogue will contain information on about 10,000 bee, 500 bat, and 300 hummingbird species.

Pollinators provide an essential ecological service to wild and cultivated plants. Their action, as pollen vectors, ensure the continuity of sexual life cycles of plants and the genetic variability that plant populations need to survive and continue to evolve. Pollination produces the seeds and fruits upon which many other wild animals depend for food and for the quality and quantity of our crop plants needed to feed the human population. Until several years ago, we depended almost entirely on the common honey bee *Apis mellifera* for the required pollination services. Presently, with the North American and European apicultural industries in deep crisis and with the recognition that the honeybee is not the most efficient pollinator for the needs of all cultivated and wild plants, great interest is being devoted to wild bees (and other wild pollinators). Today it is widely recognized that the conservation of wild bees and the development of sustainable-use systems for their populations should be among the priority items of our environmental agenda if adequate crop production and wild plant conservation are to be reached and maintained. However, we do not yet have the basic knowledge required to design a comprehensive action plan to conserve wild pollinators. We need to know how many pollinating species there are, their names, where they live, and what they pollinate. Without this information we will not be able to link the scattered biological, ecological and agricultural data in an efficient retrieval system.

There is a considerable knowledge and resource base on pollinating species in the Americas. Within the scope of the Convention on Biological Diversity (CBD) work program, Brazil and others have played a major role in the proposal and establishment of the International Pollinators Initiative (IPI). The North American Pollinator Protection Campaign has involved the U.S., Mexico, and Canada in a broad based program to conserve North American pollinators and support the IPI. In October 2002, the U.S. NBII, ITIS, and CRIA supported an important workshop to begin development of a World Bee Checklist. This workshop (21 participants from 6 countries) was important for the development of a regional (New World) and global bee checklist and related attribute databases.

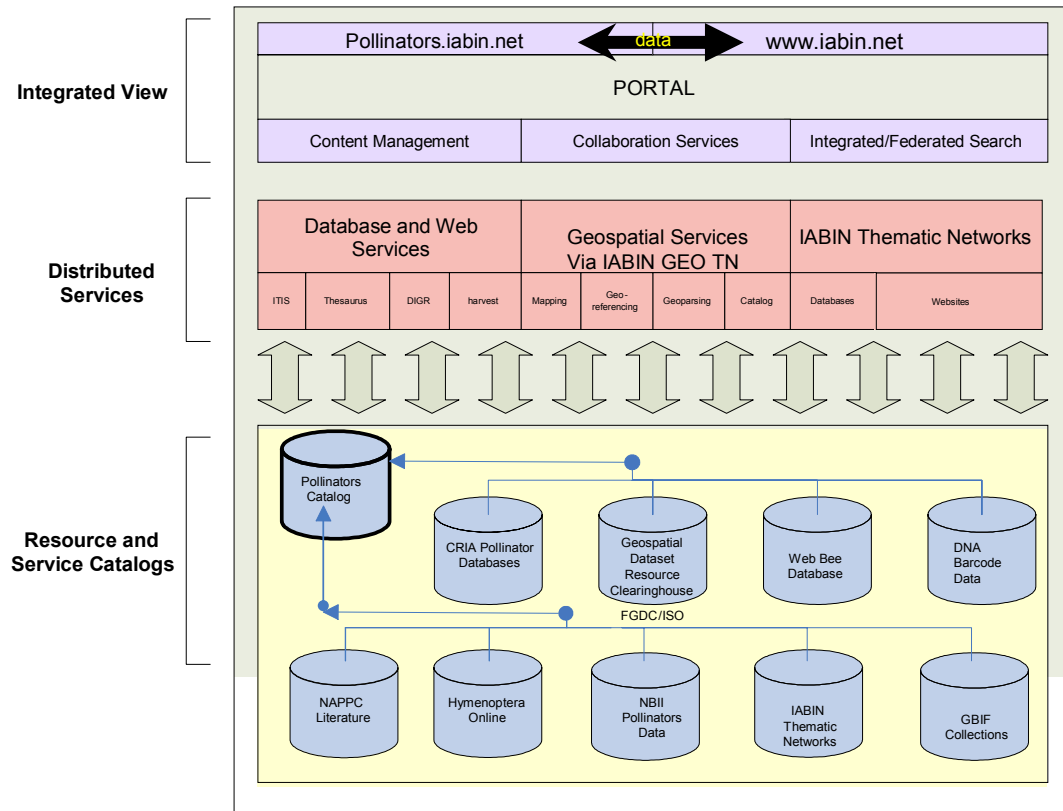
The IABIN Pollinators Thematic Network Team, through support from the USGS NBII Program, is proposing to build upon the existing “integrated” web site or portal which is being designed to

provide a wide range of information on pollinators currently available in a number of locations. The site will include both text material and links to other sites with information on the topic. NBII and various partner organizations are currently cataloging existing online content using the NBII Cataloging tool and standards. Geospatial applications are also being integrated throughout the site as they relate to various map layers focusing on pollinators. Through the use of a portal infrastructure, such capabilities as user customization, subsetting of information, dynamic display of database content, and an integrated view to all relevant pollinators data/information results are provided. This approach will allow the IABIN Thematic Network to present an integrated, highly targeted, common look/feel, and user driven site. A basic architecture diagram is show below describing the various components of the IABIN Pollinators Thematic Network “integrated” portal.

NBII will also integrate existing pollinator relevant information from such organizations as the USGS GAP Analysis Program, Department of Defense, NatureServe, US National Park Service, and US Fish & Wildlife Service. These organizations currently house a number of related pollinators resource ranging from species information to vegetation distribution information. NBII through partnerships with a leading scientific journal abstracting and indexing firm, CSA, will also provide over 1,000 high quality journal citations, references, and publications through the integrated IABIN Pollinators Thematic network portal.

An architectural representation is briefly described below to demonstrate the various components being proposed for the IABIN Pollinators Thematic network portal.

IABIN Pollinators Thematic Network Services Overview



The Architecture or Services Model above describes the 3 various Views, Distributed Services, and Resource Catalogs that will make up the IABIN Pollinators Thematic Network. Close cooperation and interoperability with related IABIN Thematic Networks (i.e. Specimen, Catalog, etc.) will occur due to similarities of data holdings, the importance of maintaining common standards across IABIN Thematic Networks, and to ultimately improve user interaction with all IABIN pollinator related information. Various databases are shown as the initial building blocks for which the IABIN Thematic Network will provide an interoperable view of their data holdings. The importance of ITIS, Thesaurus, and geospatial web-services to accomplishing the goal of providing a “one-stop-shop” for all IABIN pollinator data and information is vital. Without these common services available to the IABIN Pollinators Thematic Network and other IABIN Thematic Networks, data retrieval and application will suffer greatly.

Objectives and Relevance

The objective of this Project is to develop a network of linked and integrated databases that share critical content through a common set of data standards and exchange protocols and are ultimately viewed through a single IABIN Pollinators portal. The primary content will be a dynamic and linked on-line Catalogue of Pollinators of the Western Hemisphere that includes data on

1. Names (checklists) of bees, hummingbirds, bats, and other important pollinating species
2. Specimens in major collections
3. Pollinator experts
4. Pollinator-plant associations
5. Literature on pollinators
6. Other data as available (e.g., geographic, genetic barcode, etc.)

Methodology

We will first assemble a team of experts to oversee the progress of this project. The team will include the professionals mentioned in this proposal, as well as others, as needed, to adequately cover discipline and geographic perspectives. Next, we must agree upon standards and protocols. We will take advantage of the lessons learned and the tools, standards and protocols developed by the IABIN I3N Project, GBIF, and other IABIN Thematic Networks. Specific standards and protocols include taxonomic name, data exchange procedures, data input and output, and data update procedures. Associated data on collections, experts, and literature will conform to Darwin Core standards, DIGIR protocols, Dublin Core, FGDC, and other agreed upon IABIN standards.

Next we need to design and build the network architecture. We propose to use the existing architecture of the USGS National Biological Information Infrastructure (NBII) and I3N to house the networks and link individual country points of contact, but also add important linkages to data centers at USP, ITIS, and CRIA, NAPPC and elsewhere. Specific steps include database development; web interface development; site taxonomy development; data input system development; data output system development; usability analysis of developed sites/tools; and testing, adjustments, corrections, and launching.

The final step will include data integration, through harvesting and/or protocols such as the DIGIR, where we will import and/or link major data sources into the IABIN Pollinators Thematic network. An initial product will be to complete and integrate the Brazilian Bee Catalog (WebBee, USP), Moure's Catalog of Neotropical Bees, the Species Link project, the North America Bee Catalog, and Hymenoptera Online. Similar efforts will be made to develop current New World Checklists for bats and hummingbirds, along with making these available globally.

Achievements, Innovation and Measures of Success

Upon completion of the project we intend to have an integrated pollinator network that links the major data and information sources of the Western Hemisphere. It will allow a user to readily find taxonomic, ecological, geographical, genetic and other information for a given pollinator species and to use this information in decision making, modeling, and other applications. We will explore the use of new innovations such as semantic web to enhance search and retrieval capabilities. The

IABIN Pollinator TN will work with holders of pollinator data, including ITIS, USP, CRIA, NBII, NAPPC and others to build the comprehensive Catalogue and associated databases. Most of the partners have participated in the development of DiGIR (Distributed Generic Information retrieval) and have proven records of accessing distributed data sources, based on HTTP, XML, and UDDI. An integrated IABIN Thematic Network for Pollinators will:

- Capitalize on the already significant investment that IABIN partners have made as it relates to pollinator data collection, availability, and distribution.
- Facilitate data to remain with the data custodians and owners to insure data quality, maintenance, and improvement.
- Provide a common look and feel throughout the network of IABIN pollinator partners.
- Provide improved tools and methods for content management by IABIN pollinator partners.
- Allow users to take advantage of powerful portal search and retrieval technologies, including Advanced Search and thesaurus-aided searching.
- Allow those partners wishing to maintain their corporate identity to accomplish this while also highlighting the IABIN Pollinator Thematic Network as the overall sponsor of their efforts. This supports the leveraging of IABIN funds within projects and the multiple “branding” of related data and information throughout the IABIN network.
- Reduce the time and cost associated with the maintenance of the IABIN Pollinators Thematic Network website.

Project success will be monitored and evaluated based upon the delivery of products and the timelines given in Section 8.

4b. Work Plan

The work on this project will proceed through three phases: planning, design, and implementation. In the planning stage, experts will be assembled to review existing needs, materials, and knowledge in order to decide upon the most efficient course of action. We will review the work that team members have completed or started to date and decide upon the best methods of harmonizing and integrating the data and/or results from that work. This work includes species checklists, literature databases, research projects, educational materials, species profiles, metadata, taxonomic authorities, and preliminary lists of experts and collections. We will also determine the necessary data elements to be included. At the design stage, standards for data quality, metadata and data exchange will be developed. In addition, the system architecture will also be further defined and tailored to meet IABIN Pollinator needs, including direct involvement and linkages with country-level IABIN nodes. Finally, during implementation the system will be populated with existing data and information from the core partners. The final product will be a reasonably complete catalogue of New World pollinator species, with associated data on collections, experts, plant associations, maps, datasets, and literature. We would also like to link genetic “barcode” data and to add geospatial display capability, if feasible. We will work with other IABIN Thematic Networks and the IABIN Secretariat to insure interoperability throughout IABIN. Interfaces to the data will be available in English, Spanish, Portuguese, and French. Cooperators on the team (WebBee-USP, CRIA, ITIS, and NBII) have considerable experience in multi-lingual interfaces. A detailed sequencing of tasks is presented in Section 8.

Specific Products

Annual Work Plan

Interoperable Online Pollinator Catalogue

Network infrastructure and services

Pollinator Information System linking the Pollinator Catalogue to other IABIN Thematic Networks

Pollinators Experts database and online directory

Multi-lingual data entry tools

Multi-lingual training materials (such as identification guides, a bibliographic collection, database list, and an image gallery)

IABIN Pollinators Thematic Network webpage

IABIN PTN indicators matrix and a mechanism to monitor and evaluate them

4c. Organization and Staffing

We see four critical competencies needed to make the Inter America Pollinator Thematic Network a reality, according to the tasks and steps already described. They are

- project management,
- communication,
- information technology, and
- scientific expertise.

We have assembled an initial team of partners exhibiting these competencies, which we expect to greatly expand as the project progresses. Partner expertise is described below and in Section 5, with relevance to the project.

Partner	Affiliation	Positions or Special Contributions
Laurie Adams	Coevolution Institute	Executive Director, Coevolution Institute
Dr. Isabel Alves	University of Sao Paulo	Brazilian Bees
Dr. Coro Arizmendi	UNAM, Mexico	NAPPC Mexico
Dr. Stephen Buchmann	The Bee Works	Pollinator biology, special imaging and identification applications
Dr. Vanderlei Canhos	CRIA	Director, CRIA; special expertise in digitizing and networking collections information
Dr. Pedro Correa	University of Sao Paulo	IT expertise for Brazilian pollinators
Dr. Vera Fonseca	University of Sao Paulo	Pollinator biology, Brazilian Pollinator Initiative
Michael Frame	NBII	IT Director, NBII
Dr. Breno Freitas	Univ. Federal do Ceará	Brazilian Pollinator Initiative
Dr. Terry Griswold	USDA/ARS Logan Bee Lab	North and Middle American bee systematics, collections, and databases
Dr. David Inouye	University of Maryland	Pollinator biology, comprehensive bibliographic database on pollinators
Dr. Norm Johnson	Ohio State University	Global database and website for Hymenoptera
Dr. Rodrigo Medellin	UNAM, Mexico	NAPPC Mexico, mammalian pollinator specialist
Dr. James Quinn	UC-Davis	Special expertise in semantic web applications
David Remsen	UBIO	Database interoperability
Donna Roy	NBII	Geographic information systems
Dr. Michael Ruggiero	ITIS	Director, ITIS; taxonomic checklists, U.S. pollinator initiatives
Dr Antonio Saraiva	University of Sao Paulo	IT expertise for Brazilian pollinators
Dr. David Schindel	Barcode of Life Consortium	Genetic Bar-coding; Director CBOL
Elizabeth Sellers	NBII	NBII Pollinator Lead
Dr. Kimberly Winter	Coevolution Institute	NAPPC Coordinator
Dr. Alberto Yanosky	Guyra Paraguay	Executive Director, Guyra Paraguay

SECTION 5. TEAM COMPOSITION AND TASK ASSIGNMENTS

Professional Team				
Team Member	Firm	Area of Expertise¹	Position Assigned	Task Involvement
Laurie Adams	Coevolution Institute, USA	M, C	Co-PI	1-19
Dr. Michael Ruggiero	ITIS, USA	M, I, S	Co-PI	1-19
Dr Antonio Saraiva	University of Sao Paulo, Brazil	M, I	Co-PI	1-19
Dr. Isabel Alves	University of Sao Paulo, Brazil	S	Professional Staff	1-8, 11-14
Dr. Coro Arizmendi	UNAM, Mexico	I, S	Professional Staff	1-8, 11-14
Dr. Stephen Buchmann	The Bee Works, USA	I, S	Professional Staff	1-8, 11-14
Dr. Vanderlei Canhos	CRIA, Brazil	I, S	Professional Staff	1-14
Dr. Pedro Correa	University of Sao Paulo, Brazil	I	Professional Staff	1-10, 15-19
Dr. Vera Fonseca	University of Sao Paulo, Brazil	S	Professional Staff	1-8, 11-14
Michael Frame	NBII, USA	I	Professional Staff	1-10,15-19
Dr. Breno Freitas	Univ. Federal do Ceará, Brazil	S	Professional Staff	1-8, 11-14
Dr. Terry Griswold	USDA/ARS Logan Bee Lab, USA	S	Professional Staff	1-14
Dr. David Inouye	Univ. Maryland, USA	S	Professional Staff	1-8, 11-14
Dr. Norm Johnson	Ohio State Univ., USA	I, S	Professional Staff	1-14
Dr. Rodrigo Medellín	UNAM, Mexico	S	Professional Staff	1-8, 11-14
Dr. James Quinn	UC-Davis, USA	I, S	Professional Staff	1-10
David Remsen	UBIO, USA	I	Professional Staff	1-10
Donna Roy	NBII, Roy Associates, USA	I	Professional Staff	1-10, 15-19
Dr. David Schindel	Barcode of Life, USA	M, S	Professional Staff	1-6, 11-14
Elizabeth Sellers	NBII, USA	I	Professional Staff	1-10, 15-19

Dr. Kimberly Winter	Coevolution Institute, USA	M, C, S	Professional Staff	1-6, 11-14
Dr. Alberto Yanosky	Guyra Paraguay, PY	M, S	Professional Staff	1-6, 11-14

¹ M = Management, C = Communication, I = Information Technology, S = Scientific

SECTION 6. CURRICULUM VITAE (CV) FOR PROPOSED PROFESSIONAL STAFF

1. **Proposed Position:** Team Leader/Co-Principal Investigator
2. **Name of Firm:** Coevolution Institute
3. **Name of Staff]:** Laurie Davies Adams
4. **Date of Birth:** 23 December, 1948 **Nationality:** USA
5. **Education:** BFA – University of Illinois (High Honors 1970); Course work completed towards MFA - San Francisco State University (4.0 GPA - 1974-1976); Additional course work (all 4.0 GPA) Business Law (University of Wisconsin- Madison -1972); Philosophy, History of San Mateo (College of San Mateo 1986, 1987).
6. **Membership of Professional Associations:** American Association of Museums; North American Butterfly Association; Board of Directors, Wildlife Habitat Council; former Board of Trustees, Crystal Springs Uplands School (2 terms); Board member and Corporate Secretary of Coevolution Institute.
7. **Other Training:** N/A
8. **Countries of Work Experience:** USA (also produced film projects on site in Monaco, Japan)
9. **Languages:** Spanish – fair (speaking and reading) poor (writing); French – fair (speaking and reading) poor (writing)
10. **Employment Record:**
From 1997 to present
Employer: Coevolution Institute –
Positions held: Board member, Program Development, Executive Director (see below)

From 1989 to 1997
Employer: Principal – WWN Consulting
Positions held: President – strategic planning and communications consulting with SF based clients (also included product development, incentives, image, etc)

From 1979 to 1989
Employer: Shaklee Corporation –
Positions held: Producer, Executive Director, and Director of Merchandising for Fortune 500 Corporation specializing in biodegradable and sustainable products – Winner of Gold Medal at New York International Film Festival

From 1976 to 1979
Employer: Media Generalists –
Positions held: Producer – multimedia (clients included Wells Fargo Banking, Vancouver, Army Corps of Engineers, and Shaklee Corporation)

From 1973 to 1976
Employer: Kaiser Broadcasting Service / Field Broadcasting Service –
Positions held: University of Wisconsin Extension Art Director and Producer Television Production

From 1970 to 1973

Employer: Public Broadcasting Service

Positions held: University of Wisconsin Extension Specialist in Television Production

<p>11. Detailed Tasks Assigned</p> <p>Team Leader</p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p>Name of assignment or project: North American Pollinator Protection Campaign (NAPPC) - Executive Director Year: <u>1999-2006</u> Location: <u>San Francisco, Washington, Mexico and Canada</u> Client: _____</p> <p>Main project features: Coordinating the activities of NAPPC from its inception and building the NAPPC network of participants from under 40 to nearly 120 has taken a variety of skills that will be invaluable in the development of the PTN. From oversight of program development, database construction, fiscal oversight, membership issues and on the ground protections, the position has provided the background needed to lead the PTN team. _____</p> <p>Positions held: Executive Director</p> <ul style="list-style-type: none">• Activities performed: Coordination, recruitment and management of 80 organization public/private tri-national collaboration to protect biodiversity through a focus on the pollinators of North America including US Depts. of State, Defense, Interior, Transportation and Agriculture, US Golf Association, National Gardening Association, National Wildlife Federation, National Fish and Wildlife Federation, CONABIO, UN FAO, AgriCanda.• Initiation of National Academy of Sciences NRC Study on the status of pollinators in North America, soliciting over 40 stakeholder supporters including US Cotton Council, American Farm Bureau Federation, National Grange, American Nursery Association.• 40,000 student visits with original mobile environmental program – tied to CA State
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	<p style="text-align: center;">curriculum guidelines</p> <ul style="list-style-type: none"> • raised over \$3.2 million toward non-profit efforts • created 26 urban habitat gardens in Bay Area schools and senior centers – with curriculum support and training • Built bi-partisan support for issues within Congress – current Honorary Committee for event at the Canadian Embassy includes 11 Members of Congress from both parties • Created national exhibit at US Botanic Garden with 250,000 visitors receiving educational poster for global action to protect pollinators • Created and supervised a major publication documenting best practices in program assessment called “Measuring Results.”
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.



Date: 02/05/06

1. **Proposed Position:** Co-Principal Investigator
2. **Name of Firm:** University of São Paulo – Polytechnic School
3. **Name of Staff:** Antonio Mauro Saraiva
4. **Date of Birth:** August 10, 1958 **Nationality:** Brazil
5. **Education:** Doctor (Electrical Engineering), University of Sao Paulo (Poly-USP), 1998; M.Engineering (Electrical Engineering), University of Sao Paulo (Poly-USP), 1993; B. Agronomy (Luiz de Queiroz School of Agriculture-USP), 1987; B. Electrical Engineering, University of Sao Paulo (Poly-USP), 1980.
6. **Membership of Professional Associations:** Brazilian Association of Agroinformatics (SBI Agro - current president); American Society of Agricultural and Biological Engineering (ASABE); Brazilian Association of Agricultural Engineering (SBEA).
7. **Other Training:** Management of Scientific and Technological research, FINEP – PACTO –FIA-USP, (160 h), 1998
8. **Countries of Work Experience:** Projects and/or meetings with colleagues in U.S., U.K., Israel.
9. **Languages:** Native language – Portuguese; English (good reading and speaking, fair writing); Spanish (good reading and oral understanding); Italian (fair reading and oral understanding); French (poor reading).
10. **Employment]:**
 From: 1989 To: present
 Employer: University of Sao Paulo; Polytechnic School
 Positions held: Instructor, Assistant Lecturer, Lecturer, Associate professor
since 1989: coordinator of the Agricultural Automation Laboratory;

 From: 1981 To: 1983
 Employer: Nippon Electric Company - Brazil
 Positions held: Engineer (from junior to senior)

<p>11. Detailed Tasks Assigned</p> <p>Overall Co-Direction of project (Tasks 1-19)</p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p>Name of assignment or project: <u>Agricultural Automation Technology Development</u></p> <p>Year: <u>1995 -2001</u></p> <p>Location: <u>Sao Paulo</u></p> <p>Client: <u>FINEP - Brazil</u></p> <p>Main project features: <u>Set-up a Laboratory for research on application of IT in agriculture, involving hardware and software, and development of prototypes for planter monitor and other equipment</u></p> <p>Positions held: <u>project leader</u></p>
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	<p>Activities performed: project coordination, team recruitment, technical leadership, budget control</p> <p>Name of assignment or project: WebBee project: An information network on Brazilian bee biodiversity</p> <p>Year: 2001-2004</p> <p>Location: Sao Paulo</p> <p>Client: CNPq - Brazil</p> <p>Main project features: Develop an information system on bee biodiversity in Brazil</p> <p>Positions held: project coordinator</p> <p>Activities performed: project coordination, team recruitment, technical leadership, budget control</p> <p>Name of assignment or project: ViNCES project – Virtual Network Center on Ecosystem Services</p> <p>Year: 2005-2008</p> <p>Location: Sao Paulo</p> <p>Client: FAPESP - Brazil</p> <p>Main project features: The main objective of the project is to develop web labs (laboratory experiments and information) for remote access via the advanced Internet. These web labs focus on two ecosystem services: pollination and photosynthesis, and take advantage of a very high speed network to make available high resolution images and data in real time.</p> <p>Positions held: project coordinator</p> <p>Activities performed: project coordination, team recruitment, technical leadership, budget control</p> <p>Name of assignment or project: OpenModeller</p> <p>Year: 2005-2008</p> <p>Location: Sao Paulo</p> <p>Client: FAPESP - Brazil</p> <p>Main project features: Develop a software infrastructure for species distribution modeling</p>
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	<p>Positions held: project co-principal investigator (project coordination: Dr.Vanderlei Canhos, CRIA)</p> <p>Activities performed: coordination of the team at Polytechnic School which is responsible for research on architecture, algorithms and cluster computing.</p> <p>Organizer, Workshop “Pollinator Initiatives and the role of IT: building synergism and cooperation”, during the Sao Paulo Declaration on Pollinators plus 5 Forum. Sao Paulo, Brazil. October, 2003.</p> <p>Member, Brazilian Pollinators Initiative advisory committee, 2004-present.</p> <p>Imperatriz-Fonseca, V. L, Saraiva, A.M., DeJong D.; <u>Bees as pollinators in Brazil: assessing the status and suggesting best practices</u>, (eds). 2006, Holos editora, Ribeirao Preto, Brazil, 112p.</p> <p>Laurino, M.C., Andrade, L.C., Giannini, T.C., Imperatriz-Fonseca, V.L., Saraiva, A.M. <u>Meliponicultura no Brasil</u> v.2.0, CD-ROM, University of São Paulo, São Paulo, Brazil.</p> <p>Saraiva, A.M.; Imperatriz-Fonseca, V. L; Cunha, R.S.; Cartolano-Júnior, E.A. <u>WebBee – a Web-based information network on bees</u>. Revista de Engenharia de Computação e Sistemas Digitais. São Paulo. n.1, p.77-86, nov.2003. ISSN 1678-8435.</p> <p>Cunha, R.S.; Saraiva, A.M.; Cugnasca, C.E.; Imperatriz-Fonseca, V.L.; Hilário, S.D. <u>WebBee-based Information System for Research on Stingless Bees</u>. In: The World Congress Of Computers In Agriculture And Natural Resources, 2001, Foz de Iguaçu. 2002. p.676-682.</p>
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Antonio Mauro Saraiva /signed/ Date: 01/May/2006

1. **Proposed Position:** Co-Principal Investigator
2. **Name of Firm:** Integrated Taxonomic Information System
3. **Name of Staff:** Michael Andrew Ruggiero
4. **Date of Birth:** October 26, 1950 **Nationality:** USA
5. **Education:** Ph.D. (zoology), George Washington University, 1982. M.S. (zoology), George Washington University, 1977. B.S. (biology/education), Mount Saint Mary's College, 1972.
6. **Membership of Professional Associations:** Ecological Society of America, Scientific Research Society of Sigma Xi
7. **Other Training:** Washington Executive Seminar; Office of Personnel Management, Office of Executive Development, 1991.
8. **Countries of Work Experience:** Projects and or meetings with colleagues in U.S., Canada, Mexico, Brazil, U.K., South Africa, India, and Australia
9. **Languages:** Native language – English;
10. **Employment Record:**
 - 1999-present. U.S. Geological Survey. Director, Integrated Taxonomic Information System.
 - 1998 - 1999. U.S. Department of the Interior. International Biodiversity Coordinator.
 - 1996. Executive Office of the President of the United States, Office of Science and Technology Policy. Senior Science Policy Advisor (detail assignment).
 - 1993-98. Leader, National Biological Status and Trends Program, U.S. Geological Survey (and National Biological Service).
 - 1988-93. U.S. National Park Service. Chief, Wildlife and Vegetation Division.
 - 1985-88. National Park Service. Chief, Research and Science Division, Midwest Region.
 - 1982-85. National Park Service. Integrated Pest Management Coordinator.
 - 1981. U.S. Environmental Protection Agency, Office of Water. Biologist.
 - 1977-80. U.S. Environmental Protection Agency, Office of Toxic Substances. Biologist

11. Detailed Tasks Assigned	12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
<p>Overall Co-Direction of project (Tasks 1-19)</p>	<p>Global Biodiversity Information Facility grant, to accelerate the assembly of the Catalogue of Life, Co-PI, 2004-2006.</p> <p>Global Biodiversity Information Facility grant, to conduct an international workshop for a Catalogue of Life, Co-PI with F. Bisby, K. Wilson, and J. Shimura, 2002.</p> <p>Biotechnology and Biological Sciences Research Council (UK) grant, to sponsor a workshop on Biological Informatics and the Catalog of Life, Co-PI with Frank Bisby, 2001.</p> <p>Civilian Research and Development Foundation grant, to develop biological diversity information data bases at</p>

	<p>biosphere reserves of the Former Soviet Union, 1996-98.</p> <p>Co-Organizer, World Bee Checklist, Indiatuba, Brazil. October, 2002.</p> <p>Member, North American Pollinator Protection Campaign Steering Committee, 2000-present.</p> <p>Recent publications describing work undertaken:</p> <p>Chavan, V., Rane, N., Watve, A., Ruggiero, M. 2005. Resolving taxonomic discrepancies: Role of Electronic Catalogues of Known Organisms. <i>Biodiversity Informatics [Online]</i> :8.</p> <p>Bisby, F.A., M.A. Ruggiero, K.L. Wilson, M. Cachuelo-Palacio, S.W. Kimani, Y.R. Roskov, A. Soulier-Perkins, and J. van Hertum (eds). 2005. <u>Species 2000 and ITIS Catalogue of Life: Annual Checklist 2005</u>. CD-ROM: <u>Species 2000: Reading, U.K.</u></p> <p>Bisby, F.A., Froese, R, Ruggiero, M. A. and Wilson, K.L., (eds). 2004. <u>Species 2000 and ITIS Catalogue of Life, Annual Checklist 2004: Indexing the world's known species</u>. CD ROM, Species 2000: Los Banos, Phillipines.</p> <p>Ruggiero, M., Buchmann, S., and L. Adams. 2004. The North American Pollinator Initiative. In: <u>Solitary Bees: Conservation, Rearing, and Management for Pollination</u>, B. Freitas and J. Pereira, eds. Fortaleza: Imprensa Universitaria, 2004. pp. 35-41.</p> <p>Meese, R., V. Neronov, G. Alestchenko, and M. Ruggiero. 2003. Rapid acquisition and dissemination of standardized biological inventories from Russian biosphere reserves. <u>Biodiversity and Conservation</u> 12: 1421-29.</p>
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

A handwritten signature in black ink, appearing to be 'W. C. B. J.', written in a cursive style.

Date: 2 May, 2006

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** Universidad Nacional Autónoma de México
3. **Name of Staff:** María del Coro Arizmendi
4. **Date of Birth:** February 16, 1963 **Nationality:** Mexicana
5. **Education:** Ph.D. (Ecology), Universidad Nacional Autónoma de México 1994, M.S. (Ecology), Universidad Nacional Autónoma de México, 1990. B.S. (biology), Universidad Nacional Autónoma de México, 1988.
6. **Membership of Professional Associations:** Ecological Society of America
7. **Other Training:** _____
8. **Countries of Work Experience:** Projects and or meetings with colleagues in Mexico, U.S., Canada, Central America, Colombia, Ecuador
9. **Languages:** Native language – Spanish; English as a second language good in speaking, reading and writing
10. **Employment:**
1996-present. Universidad Nacional Autónoma de México, Laboratorio de Ecología, Unidad de Biotecnología y Prototipos, Facultad de Estudios Superiores Iztacala. Full time Professor.


<p>11. Detailed Tasks Assigned</p> <p>Tasks 1-8 and 11-14)</p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p>North American Bird Conservation Initiative. Serve in the steering national committee science its foundation. Elected by this committee as chair representative into the trilateral committee for this initiative (Canada-USA-México).</p> <p>Important Bird Areas Program. National Coordinator for México from 1995 to 2002. Coodinator for the Mexican IBAs directory (Areas de Importancia para la Conservación de las Aves de México. 2000. Arizmendi M.C. y L. Márquez-Valdelamar (eds). CIPAMEX.). Latin American Coordinator for BirdLife International 2001.</p> <p>Mexican Expansion for the North American Pollinator Protection Campaign. Grant for NFWF to organize a first meeting in Oaxaca México 2006.</p> <p>Member, North American Pollinator Protection Campaign Steering Committee, 2000-present.</p> <p>Ornelas, F., M.C. Arizmendi, L. Márquez-Valdelamar, L. Navarajo y H. Berlanga. 1993. Variability profiles in line transect bird censuses in Chamela, Jalisco. <i>The Condor</i></p>
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	<p>95: 422-441.</p> <p>Valiente-Banuet, A. Arizmendi M.C., Rojas A. y Domínguez L. 1996. Ecological relationships between columnar cacti and nectar feeding bats in Mexico. <i>Journal of Tropical Ecology</i> 12:103-119.</p> <p>Arizmendi, M.C., Domínguez C. y R Dirzo. 1996. The role of an avian nectar robber and of hummingbird pollinators in the reproduction of two plant species. <i>Functional Ecology</i>. 10 :119-127.</p> <p>Valiente-Banuet, A., A. Rojas-Martínez, M.C. Arizmendi y P. Dávila 1997. Pollination biology of two columnar cacti (<i>Neobuxbaumia macrocephala</i> and <i>Neobuxbaumia mezcalaensis</i>) in the Tehuacan Valley, central Mexico. <i>American Journal of Botany</i> 84(4):452-455.</p> <p>Valiente-Banuet, A., Arizmendi, A. Ma. del C. and Rojas-Martínez, A. 1996. Nectar-feeding bats in columnar cacti forests of Central Mexico. <i>Bats</i> 14: 12-15.</p> <p>Valiente-Banuet, A., A. Rojas-Martínez, A. Casas, M.C. Arizmendi y P. Dávila. 1997. Pollination biology of two winter blooming giant columnar cacti in the Tehuacan Valley, central Mexico. <i>Journal of Arid Environments</i> 37:331-341.</p> <p>Rojas-Martínez, A., Valiente-Banuet, A., Arizmendi, Ma. Del C. & Alcántara-Egúren, A. 2000. Seasonal permanence of the nectar-feeding bat <i>Leptonycteris curasoae</i> in North America: Does a generalized migration pattern really exist? <i>Journal of Biogeography</i> 26:1065-1077</p> <p>Arizmendi M.C. (2001). Múltiple Ecological Interactions: the case of the hummingbird pollination and the nectar robber <i>Diglossa baritula</i>. <i>Canadian Journal of Zoology</i> 79:997-1006</p> <p>Flores-Ortiz, C.M., Peñalosa-Castro I., Hernández-Portilla L.B., Davila P. Y Arizmendi M.C. (2003). MEDIUM Infrared Analysis of Floral Nectar. <i>Phytochemical Analysis</i>. 14: 319-324</p> <p>Valiente-Banuet, A , F. Molina-Freaner , A. , M.C.Arizmendi and A. Casas (2004) Geographic differentiation in the pollination system of the columnar cactus <i>Pachycereus pecten-aboriginum</i>. <i>American Journal of Botany</i> 91(6):850-855.</p>
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	<p>Valiente-Banuet A., Santos-Gally R., M.C. Arizmendi and A. Casas. (en prensa). Pollination biology of the hemiepiphytic cactus <i>Hylocereus undatus</i> in the Tehuacán Valley, Mexico. <i>Journal of Arid Environments</i>.</p> <p>Dar S, MC Arizmendi and A Valiente-Banuet. (2006) Diurnal and Nocturnal Pollination of <i>Marginatocereus marginatus</i> (Pachycereae: Cactaceae) in central Mexico. <i>Annals of Botany</i>.</p> <p>Arizmendi, M.C., L. Márquez-Valdelamar y H. Berlanga (en prensa). Local Community involvement in the development of the Important Bird Areas Program in Mexico. <i>Acta Zoologica Sinica</i>.</p> <p>Morales-Garza M.R., M. C. Arizmendi , J. E. Campos, M. Martinez-Garcia and A. Valiente-Banuet. (aceptado) Evidences on the migratory movements of the nectar-feeding bat <i>Leptonycteris curasoae</i> in Mexico using RAPD. <i>Jornal of Arid Environments</i>.</p>
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.


 Date: 1 May 2006 Day/Month/Year
[Signature of staff member or authorized representative of the staff]
 Full name of authorized representative: María del Carmen Arizmendi

Proposed Position: Professional Staff

STEPHEN L. BUCHMANN

Contact information:

President, Co-founder, The Bee Works LLC,
1870 W. Prince Road, Ste. 16
Tucson, Arizona 85701
Office phone: (520) 888-7332
E-mail: steve@thebeeworks.com
Online: www.thebeeworks.com

Education:

B.S., California State University, Fullerton, 1974
M.A., California State University, Fullerton, 1975
Ph.D., University of California, Davis, 1978

Past Employment:

2000-present President, The Bee Works, LLC, Tucson, AZ
2001-2003 CEO, Morpho, Inc., Tucson, AZ
1979-2000 Research Entomologist, USDA-ARS Carl Hayden Bee Research Center, 2000
E. Allen Rd., Tucson, AZ. 85719.
1997 Visiting Scientist, Arizona-Sonora Desert Museum
Co-Founder, The Forgotten Pollinators Campaign

Professional Affiliations:

Research Associate, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ. 85721
Adjunct Associate Professor of Entomology, Dept. of Entomology, University of Arizona, Tucson, AZ. 85721
Research Associate, Department of Entomology, American Museum of Natural History, New York, N.Y.
Research Associate, The Arizona-Sonora Desert Museum, Tucson, AZ.
Member, Linnean Society of London
Member, Sigma Xi Research Honor Society
Research Associate, Smithsonian Institution

Research Agenda:

Bee biology, pollination ecology and bee conservation. Pollination ecology of endangered/threatened plants and agricultural crop plants, especially buzz pollination (blueberries, cranberries, eggplant, peppers, tomato). Pollination of oil-producing plants and associated bees (especially *Centris*). The nesting and mating biology of native bees. Estimates of pollen/nectar carrying capacity for wildland ecosystems in deserts. Palynology, pollen analysis and identification. Flight ranges of native bees. Domesticating non-*Apis* bees (eg. *Osmia*, *Xylocopa*, *Bombus*, *Chalicodoma*) as alternative pollinators to honey bees (*Apis*)

mellifera). The conservation of native bees and other pollinators. Restoration ecology of pollinator communities. Extreme resolution scanning and multi-focal imaging of bees and other insect pollinators, development of field guides and online images for identification of U.S. and Mexican bees.

Selected publications, last 5 years (entire list includes 5 books and over 150 articles published in scientific journals):

Eardley, C., D. Roth, J. Clarke, S. Buchmann and B. Gemmill. 2006. Pollinators and Pollination: A resource book for policy and practise. The African Pollinator Initiative, Pretoria, South Africa and U. S. Department of State, 77 pp.

Buchmann, S.L. and B. Reppner. 2005. Letters from the Hive: An Intimate History of Bees, Honey, and Humankind. Bantam Books, Random House, Inc., New York, 275 pp.

Buchmann, S. and J.S. Ascher. 2005. The plight of pollinating bees. *Bee World*, September, 71-74.

Kevan, P.G., S.L. Buchmann and K. E. MacKenzie. 2005. Frugivory by Bumble Bees (Hymenoptera: Apidae: *Bombus*). *J. Kans. Entomol. Soc.* 78(1):80-81.

Chambers, N., Y. Gray and S. Buchmann. 2004. Pollinators of the Sonoran Desert. The Arizona-Sonora Desert Museum, Tucson, AZ, 160 pp.

Shepherd, M., S. Buchmann, M. Vaughan, S. Black. 2003. Pollinator Conservation Handbook, The Xerces Society in association with The Bee Works, Portland, Oregon, 145 pp.

Raguso, R., C. Henzel, S.L. Buchmann and G. P. Nabhan. 2003. Trumpet Flowers of the Sonoran Desert: Floral Biology of *Peniocereus* Cacti and Sacred Datura. *Int. J. Plant Sci.* 164(6):877-892.

Molina-Freaner, F., M. Cervantes-Salas, D. Morales-Romero, S. Buchmann and T.H. Fleming. 2003. Does the pollinator abundance hypothesis explain geographic variation in the breeding system of *Pachycereus pringlei*? *Int. J. Plant Sci.* 164(3):383-393.

Ingram, M., S. Buchmann and G.P. Nabhan. 2002. Our Forgotten Pollinators. In: The Fatal Harvest Reader: The Tragedy of Industrial Agriculture, A. Kimbrell (ed.), Island Press, Washington, D.C., pp. 191-198.

Roulston, T. and S.L. Buchmann. 2000. A phylogenetic reconsideration of the pollen starch-pollination correlation. *Evolutionary Ecology Research*, 2:627-643.

Allen-Wardell G, Bernhardt O, Bitner R, Burquez A, Buchmann S, Cane J, Cox PA, Dalton V, Feinsinger P, Ingram M, Inouye D, Jones CE, Kennedy K, Kevan P, Koopowitz H, Medellin R, Medellin-Morales S, Nabhan GP, Pavlik B, Tepedino V, Torchio P, Walker S, 1998. The

potential consequences of pollinator declines on the conservation of biodiversity and stability of food crop yields. *Con Biol* 12:8-17.

Nabhan, G.P. and S.L. Buchmann. 1997. Services Provided by Pollinators. In: *Nature's Services: Societal Dependence On Natural Ecosystems*, G.C. Daily (ed.), pp. 133 - 150, Island Press, Washington, D.C.

Buchmann, S.L. and G.P. Nabhan. 1997. *The Forgotten Pollinators*, Island Press, Washington, D.C., 292 pp (paperback edition).

Wollenweber, E. and S.L. Buchmann. 1997. Feral Honey Bees in the Sonoran Desert: Propolis Sources other than Poplars (*Populus* spp.). *Zeitschrift fur Naturforschung*. :530 - 535.

Montalvo, A.M., Williams, S.L., Rice, K.J., Buchmann, S.L., Cory, S., Handel, S.N., Nabhan, G.P., Primack, R. and R.H. Robichaux. 1997. Restoration Biology: A Population Biology Perspective. *Restoration Ecology* 5(4): 1 - 14.

Erickson, E.H. and S.L. Buchmann. 1996. Using the United States global positioning system to map the location of apiaries. *American Bee Journal* 136(2): 124 -126.

DeGrandi-Hoffman, Templin, M., Buchmann, S.L. and E.H. Erickson. 1996. BK-Economics: A money management model for beekeepers *136(5): 331 - 337*.

Buchmann, S.L. and G.P. Nabhan. 1996. *The Forgotten Pollinators*, Island Press, Washington, D.C., 292 pp. (hardcover edition).

Nabhan, G.P. and S.L. Buchmann. 1996. Pesticide disruption of interactions between rare plants and their pollinators: chemically-induced habitat fragmentation in the U.S.-Mexico borderlands, pp. In: Soto, Sonnerschein, Colburn, T. (eds.), *Comments in Toxicology*.

Buchmann, S.L. 1996. Competition between honey bees and native bees in the Sonoran Desert and global bee conservation issues. pp.125 -142, In: *The Conservation of Bees*, Matheson, A. et.al. (eds.), *Linnean Society Symposium Series No. 18*, Academic Press, London, Harcourt Brace & Company, Publishers.

Matheson, A., Buchmann, S.L., O'Toole, C., Westrich, P. and I.H. Williams. 1996. *The Conservation of Bees*, *Linnean Society Symposium Series No. 18*, Published for the Linnean Society of London and the International Bee Research Association by Academic Press, London, Harcourt Brace & Company, Publishers. 254 pp.

Sugden, E.A., Thorp, R.W. and S.L. Buchmann. 1996. Honey bee-native bee competition: focal point for environmental change and apicultural response in Australia. *Bee World* 77(1): 26 - 44.

Keys, R.N., Buchmann, S.L. and S.E. Smith. 1995. *Pollination*

Efficiency of Insects Foraging on *Prosopis velutina* in southeastern Arizona. *Journal of Applied Ecology*. 32:519 - 527.

Weislo, W.T. and S.L. Buchmann. 1995. Courtship behavior of two species of nomiine bees, *Nomia tetrazonata* and *Dieunomia heteropoda*, with a review of courtship behavior in the Nomiinae (Hymenoptera: Halictidae). *Journal of Natural History*. 29:1015 - 1027.

Roubik, D. W., Yanega, D., Aluja, S. Martin, Buchmann, S.L. and Inouye, D.W. 1995. On optimal nectar foraging by some tropical bees (Hymenoptera: Apidae). *Apidologie* 26: 197-211.

Roubik, D.W., Yanega, D., Aluja, M., Buchmann, S.L. and D.W. Inouye. 1995. On optimal nectar foraging by some tropical bees (Hymenoptera: Apidae).

Buchmann, S.L. 1995. Floral Biology and Research Techniques. Chapter 2.3 In: *Pollination of Cultivated Crop Plants*, FAO Agricultural Services Bulletin No. 118, pp. 121 - 130. D.W. Roubik (ed.), Food and Agriculture Organization of the United Nations, Rome, Italy.

Chitka, L., Kunze, J., Shipman, C. and S.L. Buchmann. 1995. The significance of landmarks for path integration in homing honeybee foragers. *Naturwissenschaften* 82: 341 - 343.

Southwick, E.E. and S.L. Buchmann. 1995. Effects of Horizon Landmarks on Homing Success in Honey Bees. *American Naturalist* 146(5): 748 - 764.

Kunzmann, M.R., Buchmann, S.L., Edwards, J.F., Thoenes, S.C. and E.H. Erickson. 1995. Africanized Bees in North America. *Our living Resources Report*, pp. 448 - 451. U.S. Government Printing Office.

Hagler, J.R., Buchmann, S.L. and D.A. Hagler. 1995. A simple method to quantify dot blots for predator gut content analyses. *Journal of Entomological Science* 30(1): 95- 98.

- 1. Proposed Position:** Staff Member
- 2. Name of Firm:** University of São Paulo – Polytechnic School
- 3. Name of Staff:** Pedro Luiz Pizzigatti Corrêa
- 4. Date of Birth:** January 01, 1965 **Nationality:** Brazil
- 5. Education:** Doctor (Electrical Engineering), University of Sao Paulo (Poly-USP), 2002; Master in Computer Science, University of Sao Paulo (Institute of Mathematical and Computational Science), 1992; B. Computer Science (Institute of Mathematical and Computational Science -USP), 1987.
- 6. Membership of Professional Associations:** Brazilian Association of Agroinformatics (SBI Agro); IEEE (Institute of Electrical and Electronics Engineers) - Computer Society.
- 7. Other Training:** Distributed Database Discipline (Graduate Studies of Polytechnic School – USP), 96 hours, March-May, 2002.
- 8. Countries of Work Experience:** Projects and/or meetings with colleagues in Europe.
- 9. Languages:** Native language – Portuguese; English (good reading and speaking, fair writing); Spanish (good reading and oral understanding);
- 10. Employment Record:**
From: 2003 To: present
Employer: University of Sao Paulo; Polytechnic School
Positions held: Instructor, Assistant Lecturer, Lecturer,
Since 2002, Investigator of the Agricultural Automation Laboratory;

From: 1997 To: 2002

Employer: UNDP (United Nation Development Programme) - Electronic Government (São Paulo State) – BR/001- Brazil

Positions held: Coordinator of Development System Team

From: 1994 To: 1997

Employer: Accurate Software (Unix Solutions for Electronic Data Interchange)

Positions held: Coordinator of Development System Team

From: 1990 To: 1993

Employer: Brazilian Agricultural Research Corporation

Positions held: Software Engineer and Researcher.

11. Detailed Tasks Assigned - Tasks 1-10 and 15-19

12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

Name of assignment or project: Modernization

Program of São Paulo State Government

Year: 1997 -2002

Location: Sao Paulo

Client: UNDP (United Nation Development Programme) – Brazil.

Main project features: Development of new Information Systems for Treasury Secretary (São Paulo State – Brazil)

Positions held: Development system leader

Activities performed: project coordination, team recruitment and technical leadership.

Name of assignment or project: Bromelia Distributed Database System

Year: 2004-2005

Location: Sao Paulo

Client: FAPESP - Brazil

Main project features: Develop an information system on Bromelia biodiversity in Brazil

Positions held: project coordinator

Activities performed: project coordination, team recruitment and technical leadership

Name of assignment or project: ViNCES project – Virtual Network Center on Ecosystem Services

Year: 2005-2008

Location: Sao Paulo

Client: FAPESP - Brazil

Main project features: The main objective of the project is to develop web labs (laboratory experiments and information) for remote access via the advanced Internet. These web labs focus on two ecosystem services: pollination and photosynthesis, and take advantage of a very high speed network to make available high resolution images and data in real time.

Positions held: investigator.

Activities performed: project coordination, team recruitment and technical leadership.

Name of assignment or project: OpenModeller

Year: 2005-2008

Location: Sao Paulo

Client: FAPESP - Brazil

Main project features: Develop a software infrastructure for species distribution modeling

Positions held: investigator (project coordination: Dr. Vanderlei Canhos, CRIA)

Activities performed: research on architecture and high performance computing.

LUCAS, Persona; CORRÊA, Pedro Luiz Pizzigatti; SARAIVA, Antônio Mauro Algoritmo Genético GARP para modelagem ambiental. São Paulo: EPUSP/USP, Produção Científica da Escola Politécnica da USP. N. 2, 2003, ISSN: 1678-2747.

CORRÊA, Pedro Luiz Pizzigatti; SUZUKI V.H; GUIMARÃES, R.G.; CARVALAHES, Mariana A Service Oriented Information System to Manage Bromelia Distributed Database. In: EFITA/WCCA2005, 25-28 July 2005 Vila Real, Portugal.

CORRÊA, Pedro Luiz Pizzigatti; SARAIVA, Antônio Mauro. Uma arquitetura de sistemas voltada para a integração de bases de dados distribuídas de biodiversidade. São Paulo: SBIAGRO – Revista da Sociedade Brasileira de Informática Aplicada a Agroindústria e Agropecuária. ISSN: 1517-3267. 6(1). p80 – 102.

CORRÊA, Pedro Luiz Pizzigatti; PEDROSO, Moacir Jr.; MARTINS, José An Architecture to Application Gateway to Access Government Legacy System, In: eGov INTEROP'05 The First Egovernment Interoperability Conference, 23-25 February 2005 - Genebra, Suíça.

13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Pedro Luiz Pizzigatti Corrêa /signed/

Date: 02/May/2006

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** Sao Paulo University
3. **Name of Staff:** Vera Lucia Imperatriz Fonseca
4. **Date of Birth:** 28/09/1946 **Nationality:** Brazilian
5. **Education:** Biologist (S. Paulo University , 1968) Doctor S. Paulo University (1975); Livre-Doenz (1989); Ecology Professor (1992) ; Colaborator Professor 2005-, at Faculdade de Filosofia, Ciencias e Letras de Ribeirão Preto, S. Paulo University
6. **Membership of Professional Associations:** Sociedade Brasileira de Progresso da Ciência (SBPC); Brazilian Pollinators Iniciative
7. **Other Training:** _____
8. **Countries of Work Experience:** _____
9. **Languages:** English (good in speakin, reading and writing); Spanish (good in reading); French (good in speaking, reading and fair in writing)
10. **Employment Record:**

From: 1972 To: 2006
 Employer: S. Paulo University
 Positions held: Instructor, Assistant Lecturer Lecturer, Professor, Collaborator Professor

11. Detailed Tasks Assigned	12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned (last years)
Tasks 1-8 and 11-14	<p>Name of assignment or project: <u>Social Organization of bees</u></p> <p>Year: <u>1999-2001</u></p> <p>Location: <u>S. Paulo</u></p> <p>Client: <u>FAPESP</u></p> <p>Main project features: <u>To work with biological information on stingless bees involved in colony reproduction</u></p> <p>Positions held: <u>project leader</u></p> <p>Activities performed: <u>project coordination, team recruitment, technical leadership, budget control</u></p> <p>Name of assignment or project : <u>WebBee project:an Information Network on Brazilian Bee Biodiversity</u></p> <p>Year: <u>2001-2004</u></p> <p>Location: <u>S. Paulo</u></p> <p>Client: <u>CNPq</u></p> <p>Main project features: <u>Develop an information system on</u></p>

	<p>Brazilian bee biodiversity</p> <p>Positions held: coordination</p> <p>Activities performed: coordinating information presented in WebBee</p> <p>Name of assignment or project TIDIA/VINCES :Virtual Networking Center of Ecosystem Services</p> <p>Year: 2005-2008 _____</p> <p>Location: S. Paulo_____</p> <p>Client: FAPESP _____</p> <p>Main project features: The main objective of this project is to develop weblabs (laboratory experiments and information) for remote access using advanced internet. These weblabs focus on two ecosystem services: Pollination and Photosynthesis, and take advantage of a high speed network to make available high resolution images and data in real time</p> <p>Positions held working on pollination as a service</p> <p>Activities performed: Improving the data and planning the next steps.</p> <p>Name of assignment or project : Biodiversity and sustainable use of pollinators, with emphasis on bees</p> <p>Year: 2006-2009 _____</p> <p>Location: S. Paulo_____</p> <p>Client: FAPESP _____</p> <p>Main project features: To breed successfully bees for use in pollination programs; to improve databases concerning bees and visited plants in Brazil ; to improve WebBee.</p> <p>Positions held : Project Coordinator_____</p> <p>Activities performed: Planning and preparation of this proposal that will begin next month.</p> <p>Name of assignment or project : Stingless bees beekeeping in small populations</p> <p>Year: 2005-2006_____</p> <p>Location: S. Paulo_____</p> <p>Client: CNPq _____</p> <p>Main project features: To verify the consequences of</p>
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	<p>breeding stingless bees in small populations</p> <p>Positions held : <u>Project Coordinator</u></p> <p>Activities performed: bee collections form normal and small populations; data analyses</p>
	<p>Other participation:</p> <p>Species 2000</p> <p>Board of WWF- Brazil (2003-until now)</p> <p>Board of Brazilian Pollinators Initiative</p> <p>Consultancy to FAO related to Brazilian pollinators state of art</p> <p>In last five years, board of S. Paulo University Science Museum , Zoology Museum, Maria Antônia Cultural Center</p> <p>Co-organizer of the International Workshop on the Conservation and Sustainable use of pollinators in Agriculture, with emphasis on bees, Oct. 1998, S. Paulo</p> <p>Co-author of the report on the recommendations of the Workshop on the conservation and sustainable use of Pollinators in Agriculture, with Emphasis on bees, submitted to SBSTTA and approved as the International Pollinator Initiative by COP5.</p> <p>Co-Organizer, World Bee Checklist, Indaiatuba, Brazil. October, 2002;</p> <p>Organizer Pollinators section at Encontro sobre Abelhas de Ribeirão Preto, 2002, 2004;</p> <p>Organizer of the international workshop <i>S. Paulo Declaration on Pollinators plus five</i>, in October 2003, held in S. Paulo</p> <p>Organizer of the Brazilian Pollinators Initiative, from 2000-2004</p> <p>Participation in preparation of official Iniciativa brasileira de Polinizadores, Brasília, Ministry of Environment, from 2004-2005</p> <p>Vice-president of NGO <i>Associação de Defesa do Meio Ambiente de S. Paulo</i> (ADEMASP).</p> <p>Books:</p>

	<p>POR, F.D.; IMPERATRIZ-FONSECA, V.L.; LENCIONI, F.- 2005- Brazilian biomes: an illustrated natural history / Biomos Brasileiros: uma história natural ilustrada. Pensoft ed., Sofia-Moscow. 208p.</p> <p>IMPERATRIZ-FONSECA, VL; DE JONG, D & SARAIVA, A.M. EDS. 2006. Bees as pollinators in Brazil: assessing the status and suggesting best practices. Holos Editora, Ribeirão Preto, 112p.</p> <p>KEVAN, P.G. & IMPERATRIZ-FONSECA, VL. EDS. 2006. Pollinating bees, the conservation link between agriculture and Nature. Brasilia, 2nd edition, 336p.</p> <p>Guest Editor of special issue of Apidologie concerning Stingless bees, to be published in May 2006</p> <p>Publication list in annex.</p>
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Vera Imperatriz-Fonseca /signed/

Date: 03/05/2006

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** U.S. Geological Survey
3. **Name of Staff:** Michael T. Frame
4. **Date of Birth:** _____ **Nationality:** USA
5. **Education:** M.S. Industrial Engineering/Information Systems , University of Tennessee at Knoxville, 1994; B.S. Electrical/Computer Engineering, University of Tennessee at Knoxville, 1988
6. **Membership of Professional Associations:** _____
7. **Other Training:** _____
8. **Countries of Work Experience:** Projects and/or meetings with colleagues in Europe and North America.
9. **Languages:** Native language – English
10. **Employment Record:**

1998- current, Center for Biological Informatics, US Geological Survey, Deputy Center Director/NBII Research & Technology Director, Reston, Virginia

 - Responsible for geospatial, informatics, and technology operations and oversight at the Center for Biological Informatics in Colorado and Virginia.
 - Technology manager and lead developer for the National Biological Information Infrastructure (NBII) (<http://www.nbio.gov>) and the NBII portal (<http://my.nbio.gov>). The NBII helps people make better decisions and provides access to the Nation’s biological resources.
 - Overall System architect for the implementation and management of the NBII Regional and Thematic Nodes.
 - Responsible for information technology and geospatial technology efforts within the USGS GAP Analysis Program. The overall mission of GAP is providing regional assessments of the conservation status of native vertebrate species and natural land cover types and to facilitate the application of this information to land management activities.
 - Responsible for several interagency Bioinformatics related partnerships and grant funding programs. These include efforts such as the USGS/NASA/NSF Biodiversity and Ecosystems Initiative, NBII Grant competition, and
 - Overall architect and project manager for the implementation of the My.NBII.Gov Internet Knowledge portal. The NBII portal can be considered to be “*a single point of personalized access to an organizations (federal, university, non-profit, etc) information holding, a tool to provide access to mission critical applications and services (e-mail, accounting systems, etc), and the necessary infrastructure to allow organizations, partners, and stakeholders the ability to collaborate in a “virtual” environment.*”
 - Responsible for performing Human Factors/Usability Analysis on various Programs web sites, tools, etc. To date two such analyses have been performed using a dedicated Usability Laboratory and basic Usability practices and principles.
 - Serves on periodic private industry Advisory Boards to offer advice on standards, information technology advancements, and market interest.

1998 – 2000 Center for Biological Informatics, US Geological Survey, Chief Information & Technology Systems, Denver, Colorado

- Responsible for all day to day operations and oversight related to the Biological Resources Division electronic mail, telecommunications, corporate Internet systems, and technical aspects of the National Biological Information Infrastructure (NBII).
- US representative to G7 Environment and Natural Resources Management Project Expert Group.
- Biological Resources Division (BRD) representative on Z39.50 biological implementers working group.
- Responsible for the conceptual design and prototype of the next generation National Biological Information Infrastructure (NBII-2).
- Technical advisor and representative on the USGS Gateway to the Earth working group.
- Council member of the BRD Information Resource Council.
- Member of the Energy and Environmental Research Information Center Advisory Board.

1988-1998. Department of Energy, Deputy Director Information Systems Development; Electrical & Computer Engineer

- Responsible for all aspects of the MIS group including day to day supervision, performance ratings, job description development, performing strategic planning, maintaining the organizations budget for hardware, software, travel, and training, and other traditional management functions. Also, responsible for providing systems development, consultation services, new technologies evaluation/implementation functions, and project management support for the company and its domestic and international customers. Major accomplishments include:
- Team leader for the evaluation and implementation of client/server software developmental tools.
- Project Manager and primary technical expert for the design and implementation of a DOE wide research and development tracking system. 15,000 R&D projects were accumulated and processed electronically from more than twenty DOE sites. These projects account for more than 14 Billion dollars of funding.
- Team leader for the acquisition and integration of Windows NT and Windows 95 into the various Programmatic, Financial, and Policy organizations within the building.
- Experienced in the development and utilization of the World Wide Web and Internet TCP/IP applications.
- Participated in organization and Department wide re-engineering assessments of processes/systems.
- Responsible for the design and implementation of the organizations first Local Area Network.

11. Detailed Tasks Assigned: Tasks 1-10 and 15-19

12. Recent Relevant Publications and Presentations:

Frame, M. Zolly, L. "Information Science and Technology Developments within the National Biological Information Infrastructure". American Libraries Association Special Journal on informatics 2003

Hale, S., Frame, M., Managing Troubled Data: Coastal Data Partnership smooth Data Integration, Environment Monitoring and Assessment, 81: 133-148, 2003

Frame, Biology 101, Portals, October 2003
Frame, M. ,Cotter, G, Zolly, L, Little, J, Information Science & Technology
Developments within the National Biological Information Infrastructure, Online
Ecological and Environmental Data, Volume 23, Number 4 2003

2003

National Biological Information Infrastructure Annual Conference 2003 – Using
Communities of Practice within the My NBII portal, Kihei, Maui
XML.Gov March 2003 - Automated Analysis and Reporting of Web Records Quality,
Washington, D.C.
Department of Defense Pest Management Conference – March 2003
NFAIS Metadiversity III – NBII Technologies and Knowledge Management activities
NATO Information Management Lecture Series – Search & Discovery Tools, Slovakia
Ecological Modeling Conference – August 2003, Kihei, Maui
IABIN Council Meeting – Technologies and Standards for adoption, Cancun, Mexico

2004

Delphi Institute 2003 XEnterprise Summit, Portal Technologies, Washington D.C.
National Geographic Library & Research meeting – NBII Technologies, Standards, and
Research endeavors, Washington D.C.
National Science Foundation 2004 Digital Government Conference – Ecoinformatics,
Seattle, WA
NATO Information Management Lecture Series – Search & Discovery Tools, Bulgaria
Plumtree 2004 Conference – Biological Portal, Hollywood, FL

13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Michael T. Frame /signed/_____

Date: 02/May/2006

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** Universidade Federal do Ceará
3. **Name of Staff:** Breno Magalhães Freitas
4. **Date of Birth:** February 25, 1965 **Nationality:** Brazil
5. **Education:** Ph.D. (biology), University of Wales, UK, 1995. M.S. (animal science), Universidade Federal do Ceará, 1991. B.S. (agronomy), Universidade Federal do Ceará, 1988.
6. **Membership of Professional Associations:** Brazilian Agronomist Professional Council (CREA)
7. **Other Training:** _____
8. **Countries of Work Experience:** Projects and/or meetings with colleagues in U.S., Canada, Brazil, U.K., Germany and South Africa
9. **Languages:** Native language – English, Foreign languages – English: good reading, speaking and writing, Spanish: good reading, poor speaking and writing.
10. **Employment:**

1996-present. Universidade Federal do Ceará. Researcher/lecturer in undergraduate and graduation courses of Animal Science and Agronomy.

Other positions held at the Universidade Federal do Ceará:

1999-2001 and 2005 – present – Coordinator of the Animal Science graduation courses

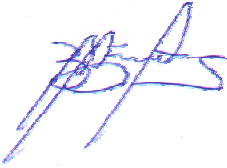
2001-2003 – Research director of the Universidade Federal do Ceará

11. Detailed Tasks Assigned	12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
<p>Tasks 1-8 and 11-14</p>	<p>Researcher member of the Brazilian National Research Council, 1996 – present.</p> <p>Member, Brazilian Pollinators Initiative Steering Committee, 2002-present.</p> <p>Principal organizer of the <u>International Workshop on Solitary Bees and their Role in Pollination</u>, held in Ceará, Brazil, in April 2004.</p> <p>Co-editor of the book: Freitas, B.M. and Pereira, J.O.P (Eds.) (2004). <u>Solitary Bees: Conservation, Rearing, and Management for Pollination</u>, Fortaleza: Imprensa Universitária. 285p.</p> <p>Freitas, B.M. (2005) <u>Crop pollination in Brazil – a stock taking</u>. (consultancy report to FAO). 61p.</p> <p>Freitas, B.M. et al. (2006) Bee management for pollination</p>

	purpose – bumblebees and solitary bees. In: <u>Bees as pollinators in Brazil</u> -assessing the status and suggesting best practices. Imperatriz-Fonseca, V.; Saraiva, A. and De Jong, D. eds. Ribeirão Preto: Holos. p. 55-62.
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.



Date: 02 May 2006

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** The Ohio State University
3. **Name of Staff:** Norman F. Johnson
4. **Date of Birth:** July 9, 1954 **Nationality:** USA
5. **Education:** Ph.D. (entomology), Cornell University, 1981. B.S. (entomology), State University of New York College of Environmental Science and Forestry, 1976.
6. **Membership of Professional Associations:** Entomological Society of America, Royal Entomological Society, American Association for the Advancement of Science, Taxonomic Database Working Group, Entomological Society of Washington, International Society of Hymenopterists
7. **Other Training:**
8. **Countries of Work Experience:** Projects and or meetings with colleagues in U.S., Canada, Brazil, U.K., South Africa, Australia, New Zealand, Russia, Ukraine, France, Spain.
9. **Languages:** Native language – English; Portuguese (good), Russian (fair), Spanish (fair), German (fair), Chinese (poor), French (poor)
10. **Employment Record:**
 1992-present. Director, C.A. Triplehorn Insect Collection, The Ohio State University.
 2002-present. Professor of Entomology, The Ohio State University
 1988-2002. Associate Professor of Entomology, The Ohio State University.
 1981-1988. Assistant Professor of Entomology, The Ohio State University.

11. Detailed Tasks Assigned	12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned Developer of Hymenoptera On-Line database (http://www.purl.org/net/hymenoptera/hns) Principal Investigator: National Science Foundation Grant, "REVSYS: Classification, phylogeny, and biology of the parasitic wasp family Scelionidae." 2004-2008 Co-Principal Investigator: National Science Foundation Grant, "Databasing the Ohio State University Acarology Collection." 2006-2009 Subcontractor: National Science Foundation Grant to American Museum of Natural History, "Development of new digital library applications in the context of a basic ontology for biosystematics information using the literature of entomology (ants)." 2004-2007. Participant, World Bee Checklist, Indiatuba, Brazil. October, 2002. Member, Entomological Society of America, Royal
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	<p>Entomological Society, Taxonomic Database Working Group, Entomological Society of Washington, American Association for the Advancement of Science</p> <p>Research Associate, Division of Invertebrates, American Museum of Natural History, 2004-present.</p> <p>Johnson, N. F. Biodiversity informatics. <u>Annual Review of Entomology</u>, under review.</p> <p>Polaszek, A. D., D. Agosti, ..., N. F. Johnson, et al. 2005. A universal register for animal names. <u>Nature</u> 437:477.</p> <p>Austin, A. D., N. F. Johnson, M. Dowton. 2005. Systematics, evolution, and biology of scelionid and platygastid wasps (Hymenoptera). <u>Annual Review of Entomology</u> 50:553-582.</p> <p>Triplehorn, C. A. and N. F. Johnson. 2004. An introduction to the study of insects. Seventh edition. Thomson Brooks/Cole, Belmont, CA. 864 pp.</p> <p>Johnson, N. F. and L. Musetti. 2004. Catalog of systematic literature of the superfamily Ceraphronoidea (Hymenoptera). <u>Contributions of the American Entomological Institute</u> 33(2):1-149.</p>
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Norman F. Johnson /signed/ _____ Date: 1 May, 2006

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** Institute of Ecology, National Autonomous University of Mexico
3. **Name of Staff:** Rodrigo Antonio Medellin
4. **Date of Birth:** December 23rd, 1957 **Nationality:** Mexican
5. **Education:** PhD (Ecology) University of Florida 1992. B.S. (Biology) National Autonomous University of Mexico, 1986
6. **Membership of Professional Associations:** Society for Conservation Biology (member of the Board of Governors), American Society of Mammalogists (member of the Board of Directors), Ecological Society of America, Mexican Society of Mammalogists
7. **Other Training:** _____
8. **Countries of Work Experience:** Mexico, Costa Rica, Bolivia
9. **Languages:** Native language: Spanish. English, good proficiency in speaking, reading, writing
10. **Employment Record:**

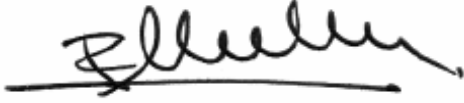
From: 1980 To: 1986
 Employer: Institute of Biology, UNAM
 Positions held: Assistant Curator of Mammals

From: 1992 To: Present
 Employer: Institute of Ecology, UNAM
 Positions held: Professor

11. Detailed Tasks Assigned	12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned
<p>Tasks 1-8 and 11-14.</p>	<p>Name of assignment or project: _____</p> <p>Year: _____</p> <p>Location: _____</p> <p>Client: _____</p> <p>Main project features: _____</p> <p>Positions held: _____</p> <p>Activities performed: _____</p>

13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

A handwritten signature in black ink, appearing to be "Z. H. H. H.", written over a horizontal line.

Date: May 1, 2006

Proposed Position: Professional Staff

David Remsen

uBio Project, Marine Biological Laboratory
7 Water Street, Woods Hole, MA 02543
Phone: 508-289-7632
Email: dremsen@mbl.edu

Education:	B.S. Biology, (1985), University of Wisconsin-Milwaukee Post-graduate courses in information science, mariculture and computer programming.
2002- present	Developer , uBio Project, MBL/WHOI Library, Woods Hole Massachusetts.
1994-present	Instructor , Biomedical Informatics; A biannual short course sponsored by the National Library of Medicine
2001-present	Technical Administrator – Regional Association of Researchers of the Gulf of Maine
1996-2002	Manager of Bioinformatics , Information Systems Division, Marine Biological Laboratory, Woods Hole Massachusetts
1996-2002	Technical Advisor , National Association of Marine Laboratories
1998-2001	Chair, Technical Committee LabNet Initiative, National Association of Marine Laboratories
1991-1996	Information Systems Developer , Information Systems Division, Marine Biological Laboratory, Woods Hole Massachusetts
1986-1991	Freelance educational software developer , Salt Water Solutions
1987-1991	Commercial Diver , marine specimen collector, Calamari Inc., joint venture
1984-1985	Commercial Diver , marine specimen collector, Marine Biological Laboratory
Other	
1999-present	Web Administrator , Shark Research Institute
1988-1991	Marine Aquarist , New England Aquarium, Boston, MA

Relevant recent memberships, panels, presentations

2003-present	Member , Scientific Subcommittee, Electronic Catalog of Names of Known Organisms (ECAT), Global Biodiversity Information Facility (GBIF)
2001-2004	Member , Taxonomic Databases Working Group
Nov. 2005	Presentation , Thomson Scientific “Access Impediments in Biological Content”
Oct. 2005	Participant , Phylocode Workshop on Names Registration Systems
Sep. 2005	Presentation , MicroOBIS workshop “Issues and Impediments related to Biological Names
Sep. 2005	Presentation , OBIS “NameBank and the Taxonomic Name Server”
Aug. 2005	KeyNote Speaker “The Tangled Tree of Life: Informatics and Biological Names,” Marine Metadata Initiative Workshop
Aug. 2005	Presentation , U.S. Geological Survey, “Tools and Services to overcome the ‘biological names problem’,”
Apr. 2005	Participant , Consortium for the Barcode of Life Workshop
Mar. 2005	Presentation , National Library of Medicine “Biological Names and Information Retrieval”,
Nov. 2004	Presentation , Assembling the Tree of Life, PI Meeting “Name-related impediments to Information Retrieval”
Oct. 2004	Invited Participant , World Wide Web Consortium Life Sciences Workshop

Mar. 2004	Presentation , Geographical Names Workshop
Feb. 2004	Participant , Nomenclators Workshop, GBIF
June, 2003	Presentation , National Science Collections Alliance
Mar 2003	Presentation , CYAMUS “The uBio Project”
Oct. 2002	Technical Advisor : ITIS Global Bee Checklist Workshop
Oct. 2002	Panel Member : Key Innovations in Biodiversity Informatics “Roundtable Discussion on 'Biological Names Servers’” Indaiatuba, Brazil, 2002

Technical skills

Unix, Mac OSX, Windows. Some Unix sysadmin., PERL, PHP, OOP (PHP5), XML, SOAP, XSLT, Regular Expressions, SQL, various RDBMS, VB, ASP, Javascript csh, bash, etc. Also expert in Photoshop, various vector graphics packages, digital video, web authoring tools, Plone and other CMS,

Technical Examples (via web addresses)

uBio	Web design, content, SOAP service, database implementations
X:ID	A web-based taxonomic key editor and player that uses the TDWG Structured Descriptive Data standard.
Google	A names-aware Google Client with a lexicon of 5 million names.
JSTOR	A search interface for integrating name-reconciliation with scholarly journal archives.
Nomenclator Zoologicus	A comprehensive database of zoological genera built in collaboration with GBIF and the Zoological Society of London. Also contains an web-based editorial subsystem.
Catalog of Living Whales	Digitized Smithsonian taxonomic bulletin derived from biological name and taxon concept services.
Multi-Classifications	Five different classifications derived from web service calls to the uBio taxon concept server
Name Processing Tools	A variety of algorithms and applications for identifying names and nomenclatural concepts.
NameBank Record	An example of a namebank SOAP object formatted for web display
PharmaBase	A database of cellular physiology and pharmacology
GenProtEC	<i>E.coli</i> genome and proteome database (original versions 1999-2001)
The Horseshoe Crab	All content, graphics and design (2000)
Medusae	All content, graphics and design (1998)

Publications

Smith, P.J.S. and Remsen, D. (2006). Using Pharmabase to Perform Pharmacological Analyses of Cell Function. In: Current Protocols in Bioinformatics. Wiley and Sons, In Press.

Patterson, D.J., Remsen, DP., Marino , WA, Norton, C. (2005) Taxonomic Indexing – Extending the role of taxonomy, Systematic Biology (in press)

Remsen, D. R., Norton, C. and Patterson, D. J. (2005) Taxonomic informatics tools for the electronic Nomenclator Zoologicus. Biological Bulletin (in press).

Patterson, D.J., Remsen, D.P. and Norton, C., (2003) Comment on Zoological Record and registration of new names in zoology, Bulletin of Zoological Nomenclature, 60 (4), 7-11, December 2003

1. **Proposed Position:** Professional Staff
2. **Name of Firm:** United States Geological Survey, National Biological Information Infrastructure (USGS- NBII)
3. **Name of Staff:** Elizabeth Ann Sellers
4. **Date of Birth:** March 5, 1975 **Nationality:** USA
5. **Education:** James Cook University of North Queensland, Australia, Bachelor of Science Honors Weed Science (postgraduate), 1996. Bachelor of Science Botany, Tropical Geomorphology (undergraduate), 1992-1995.
6. **Membership of Professional Associations:** N/A
7. **Other Training:**
2004 – Adobe Photoshop I, EEI Communications, Alexandria, VA.
2003 – GIS Professional Certificate, George Mason University, VA.
2003 – Web Site Accessibility: Section 508 – WestLake Internet Training, VA.
2003 – Mastering a Web Site, U.S.G.S. Office of Information, Reston, VA.
2000 – Practical Software Testing Methods, Learning Tree International, VA.
1999 – COBOL85 Basic Programming, Northern Virginia Community College.
8. **Countries of Work Experience:** Projects and or meetings with colleagues in U.S., Canada, Mexico, Costa Rica, Panama, Morocco, and Australia
9. **Languages:** native language - English, Spanish (poor – speaking, reading), Japanese (poor – speaking, reading, writing)
10. **Employment Record:**
 2004 – present. United States Geological Survey – National Biological Information Infrastructure, USA. Technical Information Specialist – Biology.
 2003. United States Geological Survey – Biological Resources Discipline, USA. Web Master.
 2003. SpecPro Inc., USA. Senior Naturalist.
 2002. Institute for Bird Populations, USA. Avian Biology Field Intern.
 2002. Altarus Inc., USA. Software Technical Writing Consultant.
 2000-2001. TecSec Inc., USA. Software Quality Assurance Analyst.
 1999-2000. Metron Inc., USA. Software Quality Assurance Analyst.
 1997-1999. Michael Round Fine China, USA. Web Master.
11. **Detailed Tasks Assigned:** (Tasks 1-10, 15 – 19)
12. **Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned**
 IABIN Invasives Information Network (I3N) web site, 2005-present, USA, Inter-American Biodiversity Information Network, Web Content Manager, web site design, content synthesis, and maintenance.
 I3N Database on Invasive Alien Species template, 2005-present, USA, Inter-American Biodiversity Information Network, Tools Representative, testing and promotion of database application, review and editing of user guides.
 Global Invasive Species Information Network (GISIN) web site, 2005, USA, Global Invasive Species Information Network (GISIN), Webmaster, web site design and implementation.
 Experts Meeting on Implementation of a Global Invasive Species Information Network (GISIN), 2004, Department of State, online virtual Community Manager and Meeting Logistics Assistant.

Invasive Species Information Node, 2004-present, USA, National Biological Information Infrastructure, Webmaster and Content Manager, web site design, content synthesis, and maintenance.

Survey of Online Invasive Species Databases and Information Systems, 2004, Global Invasive Species Information Network (GISIN), Research Assistant, internet research, membership survey, and analysis of results.

Invasive Species Science Program web site, 2003, USA, United States Geological Survey Biological Resources Discipline, Webmaster, web site design and implementation.

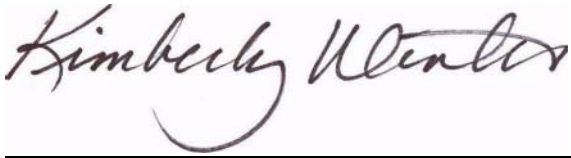
Elizabeth Ann Sellers /Signed/ Date: 28/04/06

1. **Proposed Position:** North and Central American Bioinformatics Coordinator
2. **Name of Firm:** Coevolution Institute
3. **Name of Staff:** Kimberly Ann Winter
4. **Date of Birth:** April 19, 1969 **Nationality:** United States citizen
5. **Education:** Ph.D., Wildlife Ecology and Management (2002), University of Georgia, Athens, GA; M.A., Ecological Anthropology (1997), University of Georgia, Athens, GA; Graduate Certificate, Conservation Ecology and Sustainable Development, University of Georgia, Athens; B.S., Fisheries and Wildlife (1991), University of Missouri, Columbia, MO
6. **Membership of Professional Associations:** Society of Conservation Biology
7. **Other Training:** _____
8. **Countries of Work Experience:** Bolivia, Ecuador
9. **Languages:** Spanish (good – spoken, read, and written)
10. **Employment Record:**
 From: 2004 To: 2006 (present)
 Employer: Coevolution Institute
 Positions held: International Coordinator

<p>11. Detailed Tasks Assigned</p> <p>Coordinate interface with multiple stakeholders; conduct training and assessments; facilitate communication; enlist and subscribe in-country participants and end users.</p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p>Name of assignment or project: <u>Peace Corps – 1992-1993; Ecuador (3 times) – latest 1996</u></p> <p>Year: (see above) _____</p> <p>Location: <u>Cotacachi, Ecuador; Vella Vista, Bolivia</u></p> <p>Client: <u>Ecuadorian Federation; Bolivia</u></p> <p>Main project features: <u>interface between govt. and indigenous people; survey of subsistence fishing and hunting to develop management plan.</u></p> <p>Positions held: <u>Liaison between Ecuadorian National Park Service and UNORCHC</u></p> <p>Activities performed: <u>Environmental management liaison</u></p>
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13. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes me, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Handwritten signature of Kimberly Winters in black ink on a light pink background.

Date: 28/04/06

1. **Proposed Position:** Professional Staff

2. **Name of Firm:** Guyra Paraguay

3. **Name of Staff:** Alberto Yanosky

4. **Date of Birth:** October 18, 1962 **Nationality:** Argentinean

5. **Education:**

NAME, PLACE AND COUNTRY	ATTENDED FROM/TO		DEGREES and ACADEMIC	MAIN COURSE OF STUDY
	Mo./Year	Mo./Year	DISTINCTIONS OBTAINED	
Universidad Nacional de Mar del Plata. Facultad de Ciencias Exactas y Naturales, Mar del Plata, Argentina	March 1993	July 1999	Doctor en Ciencias	<i>Zoology & Ecology</i>
Universidad Nacional de Entre Ríos. Facultad de Ciencias Económicas, Paraná, Argentina	March 1994	December 1998	Magister Scientae en Metodología de la Investigación Científica y Técnica	<i>Scientific Methodology</i>
Universidad Nacional de Mar del Plata, Facultad de Ciencias Exactas y Naturales, Mar del Plata, Argentina	March 1983	October 1986	Licenciado en Ciencias Biológicas	<i>Zoology & Ecology</i>

6. **Membership of Professional Associations:**

Board Member of:

- BirdLife International's Global Council, Board member elected at large, Cambridge, UK
- Chair of BirdLife International Americas' Regional Council, Quito - Ecuador
- Natural Land Trust, Paraguay
- Colegio de Organizaciones de la Sociedad Civil, Paraguay,
- Round Table for Responsible Soybean

Former Board member of

- Fundación para el Desarrollo Sostenible del Chaco Sudamericano, Paraguay
- Guyra Paraguay
- Sociedad Geográfica del Paraguay

Institutional Membership to:

- UICN
- Conservation International
- The Nature Conservancy
- WWF
- World Land Trust
- IABIN

Referee for the following Scientific Journals:

1992-3 Arbitro Científico para el Wildlife Society Bulletin.
 1992-3 Arbitro Científico para el Journal of Wildlife Management
 1995 Arbitro Invitado para Vida Silvestre Neotropical.
 1998- Arbitro Científico y Comité de Expertos Arch. de Zootec. (España)
<http://www.uco.es/organiza/servicios/publica/az/az2.htm>
 1997 Revisor de “Checklist and Index. Snakes of the Americas” por Bob L. Tipton,
 manuscrito de 332 pp.
 2002-3 Revisor de la Revista del Museo de Ciencias Naturales del Paraguay.

Member of:

- Asociación Herpetológica Argentina, La Plata, Argentina.
- Asoc. Aquariol. y Herpetol. Museo de Zoología, Nancy, Francia.
- Snake Ecology Group, Cleveland, USA.
- Crocodile Specialist Group, Florida, USA.
- Australian Wildlife Research Association, Melbourne, Australia.
- Wildlife Society, Bethesda, USA.
- Asociación de Ciencias Naturales del Litoral, Santa Fé, Arg.
- Veterinaria Argentina, Buenos Aires, Argentina.
- Asociación Argentina Biología del Desarrollo, Tucumán, Arg.
- Herpetologist's League, Austin, Texas, USA.
- American Soc. Ichthyol. & Herpetol., Carbon Dale, Ill., USA.
- Soc. Study of Amphibians-Reptiles (SSAR), Oxford, Ohio, USA.
- Herpetological Society of Maryland, Maryland, USA.
- Soc. Zoológica del Plata, La Plata, Argentina.
- Archivos de Zootecnia (Barcelona, España)
- Sociedad Científica del Paraguay
- Natural Areas Association – USA
- The Science Advisory Board – USA

7. **Other Training:**

Escuela de Enseñanza Media No. 2, Tte. Félix Origone, Mar del Plata, Argentina	High / Technical School	March 1976	December 1980	Perito Mercantil
Universidad Nacional de Entre Ríos. Facultad de Ciencias Económicas, Paraná, Argentina	Specialization (Especialización en Metodología de la Investigación Científica y Técnica)	March 1994	July 1996	Methodology
Louisiana Department of	Wildlife management	July 1998	September	Professional Biologist

Wildlife & Fisheries. Fur and Refuge Division, Baton Rouge, Louisiana, USA			1998	
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Scholarships and Grants received

- 1988 Agosto / Septiembre. Perfeccionamiento en el manejo de vida silvestre, especialmente caimanes americanos. Dep. Wildlife & Fisheries del Estado de Louisiana, USA.
- 1996 Julio / Agosto. "Land Stewardship for Conservation Professionals from Latin America and the Caribbean". Atlantic Center for the Environment, Quebec-Labrador Foundation, USA y Canadá.
- 1997 "Protección de la Biodiversidad y Desarrollo Sustentable en la Cuenca Alta del Río Jejui, Paraguay", Proyecto A- Contrato PRY/B7-5041/I/95/021 1996-1997. Unión Europea / Fundación Moisés Bertoni. Gerente Operativo del Proyecto.
- 1997 "Protection of the Mbaracayú Forest Nature Reserve (Paraguay)" Netherlands Committee for IUCN / Fundación Moisés Bertoni. Gerente Operativo del Proyecto
- 1997/8 "Estudio comparado sobre uso y valoración de los recursos en diferentes formas de gestión de espacios naturales protegidos en Paraguay", del Programa de Cooperación Científica con Iberoamérica (MEC-AECI/Fundación Moisés Bertoni de Paraguay, 1997-1999; colaboran Instituto de Bienestar Rural y Dirección de Parques de Paraguay); la investigación cuenta también con al apoyo del PB96-0044, de la Dirección General de Enseñanza Superior. (Contraparte nacional paraguaya).
- 1998 "Feasibility of Economic Production Systems and Use of Non-Timber Resources from Native Forst in the Buffer Zone of Private Reserve Initiatives in Paraguay". Homeland Foundation / Fundación Moisés Bertoni. Gerente Operativo del Proyecto.
- 1998 "Paraguay en la iniciativa MERCOSUR y AMBIENTE" / Centro de Investigación y Planificación del Medio Ambiente (Santiago de Chile) / Fundación Tinker.
- 1998-2002 "Consolidación d'un modele de developpement soutenable pour l'annee 2000: Le haut bassin du rio jejui et la reserve naturelle de la foret Mbaracayu (Paraguay). Fondo Francés para el Medio Ambiente Mundial, Francia. Director del Proyecto. 1,2 millones U\$S.
- 1999 "IV Congreso Internacional sobre Manejo de Fauna Silvestre en Amazonía y Latinoamérica" 4 al 8 de octubre de 1999, Asunción-Paraguay (FMB, Cites-Py y Universidad de Florida), co-coordinador nacional. Recaudación en bienes y servicios > 100,000 U\$S, > 500 participantes.
- 2000- 2002 Global Environment Facility- Biodiversity conservation and sustainable use in the Mbaracayú Natural Reserve (Paraguay). Banco Mundial. Desarrollo del Proyecto GEF, bloque A & B. 1 millón de USD
- 2000- Global Environment Facility - Eliminating barriers to the effective management of four private nature reserves in the Interior Atlantic Forest (IAF), eastern Paraguay. PNUD, bloque A. 1 millón de USD

- 2001- Workshop on Community and Private Land Conservancy Programs for Managing Natural Resources in the Interior Atlantic Forest, Paraguay. Fondos WWF/AID con participación de tres profesionales de Zimbabwe, líderes del Programa Campfire. Liderado en conjunto con Urs Kreuter de Texas A&M University.
 - 2002 – Beca del Programa de WWF Rusell E. Train “Education for Nature” para realizar curso de capacitación en Alemania (Berlín y Potsdam) en capacidad para consultorías, 3,000 US\$.
 - 2002- Leadership empowerment in the Mbaracayú Forest Biosphere Reserve, Paraguay, Fundación Avina, 280 K US\$.
 - 2002- InterAmerican Biodiversity Information network (IABIN), coordinador para subregión 3 (Argentina, Chile, Uruguay, Paraguay e Islas Malvinas), Proyecto GEF, Banco Mundial, OEA, 48 K US\$.
 - 2005 – WWF Russell E. Train Education for Nature Program, award Professional Development Grant for \$ 3,500.
 - Proyectos conseguidos con financiamiento internacional para conservación de biodiversidad, (3 millones de dólares, detalles a solicitud).
- 8. Countries of Work Experience:** Argentina, Bolivia, Brazil, Chile, Paraguay, Peru, South Africa, Uruguay, among others

9. Languages:

OTHER LANGUAGES	READ		WRITE		SPEAK		UNDERSTAND	
	Easily	Not Easily	Easily	Not Easily	Easily	Not Easily	Easily	Not Easily
<i>Spanish</i>	x		x		x		X	
<i>English</i>	x		x		x		X	
<i>Portuguese & Guarani</i>	x		x		x		X	
<i>French</i>	x		x		x		X	
<i>German & Italian</i>		x		x		x		x

10. Employment Record:

A. PRESENT POST				
FROM	TO	SALARIES PER ANNUM		EXACT TITLE OF YOUR POST:
MONTH/YEAR	MONTH/YEAR	STARTING	FINAL	
October 2001	Present	\$ 27,500	\$ 32,500	Executive Director
NAME OF EMPLOYER: Asociación Guyra Paraguay			TYPE OF BUSINESS: <i>General Manager, CEO</i>	
ADDRESS OF EMPLOYER: Cnel. Rafael Franco 381, Asunción Paraguay			NAME OF SUPERVISOR: Council of Board	
			NO. AND KIND OF EMPLOYEES SUPERVISED BY YOU: 34	REASON FOR LEAVING: Present position
DESCRIPTION OF YOUR DUTIES				
General management of the organization, leading biodiversity conservation organization in Paraguay, annual budget around \$ 1 million. Actions based on species, sites, landscapes, environmental education, land purchases for conservation, private conservation, incentives, traditional people in nature, civil society participation.				

B. PREVIOUS POSTS (IN REVERSE ORDER)				
FROM	TO	SALARIES PER ANNUM		EXACT TITLE OF YOUR POST:
January 1995	MONTH/YEAR September 2001	STARTING \$ 13,000	FINAL \$ 25,000	Initially as Scientific Advisor, finally Deputy Director
NAME OF EMPLOYER: Fundación Moisés Bertoni para la conservación de la naturaleza (FMB)				TYPE OF BUSINESS: Private conservation, biodiversity conservation, sustainable development
ADDRESS OF EMPLOYER: Procer Argüello 208 c/Quesada, Asunción, Paraguay				NAME OF SUPERVISOR: Raul Gauto & Nancy Cardozo
				NO.AND KIND OF EMPLOYEES SUPERVISED BY YOU: 60
				REASON FOR LEAVING: Offered the CEO position at Guyra Paraguay
DESCRIPTION OF YOUR DUTIES				
Management of the organization, director of Mbaracayú Forest Nature Reserve, coordination of Mbaracayú Foundation (linked to FMB), director of Bosque Mbaracayú Biosphere Reserve. Biodiversity conservation, network of private nature reserves.				
FROM	TO	SALARIES PER ANNUM		EXACT TITLE OF YOUR POST:
MONTH/YEAR March 1987	MONTH/YEAR December 1994	STARTING \$ 9,500	FINAL \$ 13,000	Director, Administrator and Resident Biologist
NAME OF EMPLOYER: Alparamis S.A.				TYPE OF BUSINESS: Private nature reserve management
ADDRESS OF EMPLOYER: El Bagual Ecological Reserve, Presidente Yrigoyen, Formosa, Argentina				NAME OF SUPERVISOR: Ernique Götz
				NO.AND KIND OF EMPLOYEES SUPERVISED BY YOU: 4
				REASON FOR LEAVING: Offered a position in Paraguay to develop a private nature reserve program.

SECTION 7. STAFFING SCHEDULE

No.	Name of Staff	Staff Input (Cumulative Work-Months)												Total Work-Months			
		1	2	3	4	5	6	7	8	9	10	11	12				
1	Laurie Adams	■	■	■	■	■											4.00
2	Dr. Isabel Alves	■	■														2.00
3	Dr. Coro Arizmendi	■	■														0.75
4	Dr. Stephen Buchmann	■	■														0.75
5	Dr. Vanderlei Canhos	■	■														0.75
6	Dr. Pedro Correa	■	■	■	■	■	■	■									6.00
7	Dr. Vera Fonseca	■	■	■													1.00
8	Michael Frame	■	■	■													1.00
9	Dr. Breno Freitas	■	■														0.75
10	Dr. Terry Griswold	■	■														0.75
11	Dr. David Inouye	■	■														0.75
12	Dr. Norm Johnson	■	■														1.00
13	Dr. Rodrigo Medellín	■	■	■													1.50
14	Dr. James Quinn	■	■														0.75
15	David Remsen	■	■														0.75
16	Donna Roy	■	■														0.75
17	Dr. Michael Ruggiero	■	■	■	■												3.00
18	Dr Antonio Saraiva	■	■	■													2.00
19	Dr. David Schindel	■	■														0.75
20	Elizabeth Sellers	■	■	■	■												2.00
21	Dr. Kim Winter	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	12.00
22	Dr. Alberto Yanosky	■	■														0.75
23	Administrative Assistant	■	■	■	■	■	■	■									6.00
24	IT Specialist (U.S.)	■	■	■	■	■	■	■									6.00
Total Staff Work Months														55.75			

SECTION 8. WORK SCHEDULE

Task*	Quarter-year											
	1	2	3	4	5	6	7	8	9	10	11	12
1. Evaluate and assess the information needs of decision makers and set priorities	█	█	█	█				█	█			
2. Determine current pollinator conservation initiatives to establish partnerships	█	█	█	█	█	█	█	█	█	█	█	
3. Gap analysis of pollinator knowledge	█	█	█	█								
4. Coordinate with local, national, and international conservation and protection projects	█	█	█	█	█	█	█	█	█	█	█	
5. Assemble a Committee of Experts	█	█										
6. Meetings of Committee of Experts		█				█						
7. Agree upon standards and protocols	█	█										
8. Annual Work Plan		█			█			█				
9. IABIN PTN indicators matrix and a mechanism to monitor and evaluate them				█								
10. Design and build network architecture to allow searches across all connected databases	█	█	█	█								
11. Develop an interoperable online Pollinator Catalog	█	█	█	█								
12. Import, and link taxonomic data from major sources				█	█	█	█	█				
13. Link to specimen data bases				█	█	█	█					
14. Include pollinator experts									█	█	█	█
15. Include pollinator literature									█	█	█	█
16. Include pollinator/plant associations									█	█	█	█
17. Design and implement tools in order to integrate with other TN's			█	█	█	█	█	█				
18. Maintain the IABIN Pollinators Thematic Network					█	█	█	█	█	█	█	█
19. Develop multi-lingual data entry tools and training manuals									█	█	█	█

* Products noted in **boldface**

SECTION -1. Financial Information Submission Form



Coevolution Institute
423 Washington St., 5th Floor
San Francisco, California 94010 USA

May 3, 2006

Dr. Ivan Valdespino
Director IABIN Secretariat
Cuidad del Saber
Clayton, Republica de Panama

Dear Dr. Valdespino:

We, the undersigned, offer to provide the consulting services for Inter American Pollinators Thematic Network in accordance with your Request for Proposal dated February 24, 2006 and our Technical Proposal. Our attached Proposal Financial Information is for the sum of One Hundred and Eighty Thousand Dollars (\$180,000). This amount is exclusive of the local taxes, which we understand are not valid reimbursable expenses.

Our Proposal Financial Information shall be binding upon us subject to the modifications resulting from negotiations, up to expiration of the validity period of the Proposal, i.e. before the date indicated in Paragraph Reference 6.1.

No commissions or gratuities have been or are to be paid by us to agents relating to this Proposal and Contract execution.

We understand you are not bound to accept any Proposal you receive and that the financial information provided here is only of informative nature since final decision on this aspects is contingent upon negotiation of a possible Coordinating Institution Transfer Agreement with the SG/OAS.

Yours sincerely,

Authorized Signature: *(see above)*

Name and Title of Signatory: Laurie Davies Adams, Executive Director,

Name of Firm: Coevolution Institute

Address: 423 Washington St., 5th Floor, San Francisco, CA USA

SECTION 2. SUMMARY OF COSTS

<i>Item</i>	Costs
	<i>[US Dollars]</i>
Total Costs of Financial Part of the Proposal	\$180,000 GEF \$571,374 CI Contribution \$751,374 Total

SECTION 2A. DETAILED SUMMARY OF COSTS

ITEM/TASK	ESTIMATED COSTS	Sources of Funding	
		GEF/IABIN	COFINANCING
Personnel Costs: Laurie Adams	21,600	14,904	6,696
Personnel Costs: Kimberly Winter	53,591	36,978	16,613
Personnel Costs: Jen Marks	19,565	13,500	6,065
WebBee (USP) personnel and informatics costs: Antonio Saraiva, Vera Fonseca and Technical Personnel (TBD)	129,000	45,000	84,000
Other misc. costs (travel, equipment, subcontracts, etc) for Coevolution Institute, WebBee (USP), and NBII	69,618	39,618	30,000
Meeting Costs	80,000	30,000	50,000
ITIS contributed personnel and informatics costs: Michael Ruggiero (\$21,500), informatics (\$30,000)	51,500	0	51,500
Guyra Paraguay contributed personnel and informatics costs	9,500	0	9,500
USDA Logan Bee Lab contributed personnel and informatics	10,000	0	10,000
Coevolution Institute pollinator informatics grants	135,000	0	135,000
WebBee/USP pollinator informatics grant	100,000	0	100,000
Other contributed personnel costs for meetings and consultation costs: 20 (people) X 15 (work-days) X \$240 (per day)	72,000	0	72,000
Total	751,374	180,000	571,374

SECTION 3. BREAKDOWN OF COSTS BY ACTIVITY

<p>Group of Activities: <u>Whole Project</u></p>	<p>Description: <u>Establish IABIN Pollinators Thematic Network</u></p>
<p><i>Cost component</i></p>	<p>Costs</p>
	<p>[US Dollars]</p>
<p>Remuneration</p>	<p>\$65,340</p>
<p>Reimbursable Expenses</p>	<p>\$114,660</p>
<p>Subtotals</p>	<p>\$180,000</p>

SECTION 4. BREAKDOWN OF REMUNERATION

Group of Activities (Phase): Whole Project						
Name	Position	Staff-monthly Rate <i>(Home and Field)</i>	Input <i>(Staff-months)</i>	GEF Contribution <i>US Dollars</i>	CI Contribution <i>US Dollars</i>	Total
Laurie Davies Adams	Team Leader	\$5,400	4	\$14,904	\$6,696	\$21,600
Kimberly Winter	Bioinformatics Specialist	\$4,466	12	\$36,978	\$16,613	\$53,592
Jen Marks	Project Coordinator	\$3,261	6	\$13,500	\$6,065	\$19,566
Total Costs				\$65,340	\$29,418	\$94,758

SECTION 4A. SUMMARY BREAKDOWN OF REMUNERATION

Name	Position	Staff-month Rate
Staff		<i>[Home and field at same rate]</i>
Laurie Davies Adams	Team Leader	\$5400
Kimberly Winter	Bioinformatics Specialist	\$4466
Jen Marks	Project Coordinator	\$3261

SECTION 5. BREAKDOWN OF REIMBURSABLE EXPENSES

Group of Activities (Phase): Whole Project					
N°	Description²	Unit	Quantity	Unit Cost	Total in US Dollars
1	Per diem allowances Project Management	\$143/Day	20	\$2860	\$2860
2	Per diem allowances Meeting Support	\$143/Day	15	\$10,725	\$10,725
3	International flights US-Brazil – roundtrip – Project Management	\$1000/ Trip	4	\$4000	\$4000
4	International flights US-Brazil – roundtrip – Meeting Support	\$1000/ Trip	15	\$15,000	\$15,000
5	Miscellaneous travel expenses - Project Management	\$200/ Trip	4	\$800	\$800
6	Miscellaneous travel expenses - Meeting Support	\$200/ Trip	15	\$3000	\$3000
7	Communication costs between CA, DC (USA) and Brazil	\$500	1	\$500	\$500
8	Drafting, reproduction of reports	\$500	1	\$500	\$500
9	Equipment, instruments, materials, supplies, etc. Project Management	\$1000	1	\$1000	\$1000
10	Equipment, instruments, materials, supplies, etc. Meeting Support	\$1000	1	\$1000	\$1000
11	Subcontracts	Bioinformatics – (Brazil)	1	\$45,000	\$75,000
		Web-portal	1	\$30,000	
Total Costs					\$114,660

SECTION 5A. SUMMARY BREAKDOWN OF REIMBURSABLE EXPENSES

No.	Description	Unit	Unit Cost
20	Per diem allowances – Project Management	20x\$143/Day	\$2860
15	Per diem allowances – Meeting Support x 5 day meeting	15x\$143/Day	\$10725
4	International flights US- Brazil – roundtrip – Project Management	4x\$1000/Trip	\$4000
15	International flights US- Brazil – roundtrip – Meeting Support	15x\$1000/Trip	\$15000
4	Miscellaneous travel expenses - Project Management	4x\$200/Trip	\$800
15	Miscellaneous travel expenses– Meeting Support	15x\$200/Trip	\$3000
1	Communication costs between CA, DC (USA) and Brazil	1x\$500	\$500
1	Drafting, reproduction of reports	1x\$500	\$500
1	Equipment, instruments, materials, supplies, etc. Project Management	1x\$1000	\$1000
1	Equipment, instruments, materials, supplies, etc. – Meeting Support	1x\$1000	\$1275
1	Subcontracts	1xBioinformatics – Brazil (\$45,000) 1xWeb-portal (\$30,000)	\$75,000
	TOTAL		\$114,660

Appendix

Financial Negotiations - Breakdown of Remuneration Rates

1. Review of Remuneration Rates

1.1 The remuneration rates for staff are made up of salary, social costs, overheads, fee that is profit, and any premium or allowance paid for assignments away from headquarters. To assist the firm in preparing financial negotiations, a Sample Form giving a breakdown of rates is attached (no financial information should be included in the Technical Proposal). Agreed breakdown sheets shall form part of the negotiated contract.

1.2 The IEC-GS/OAS are charged with the custody of external, grant funds and are expected to exercise prudence in the expenditure of these funds. The IEC-GS/OAS are, therefore, concerned with the reasonableness of the firm's Financial Part of the Proposal, and, during negotiations, it expects to be able to review audited financial statements backing up the firm's remuneration rates, certified by an independent auditor. The firm shall be prepared to disclose such audited financial statements for the last three years, to substantiate its rates, and accept that its proposed rates and other financial matters are subject to scrutiny. Rate details are discussed below.

(i) Salary

This is the gross regular cash salary paid to the individual in the firm's home office. It shall not contain any premium for work away from headquarters or bonus (except where these are included by law or government regulations).

(ii) Bonus

Bonuses are normally paid out of profits. Because the IEC-GS/OAS IEC-GS/OAS does not wish to make double payments for the same item, staff bonuses shall not normally be included in the rates. Where the prospective CI's accounting system is such that the percentages of social costs and overheads are based on total revenue, including bonuses, those percentages shall be adjusted downward accordingly. Where national policy requires that 13 months' pay be given for 12 months' work, the profit element need not be adjusted downward. Any discussions on bonuses shall be supported by audited documentation, which shall be treated as confidential.

(iii) Social Costs

Social costs are the costs to the firm of staff's non-monetary benefits. These items include, *inter alia*, social security including pension, medical and life insurance costs, and the cost of a staff member being sick or on vacation. In this regard, the cost of leave for public holidays is not an acceptable social

cost nor is the cost of leave taken during an assignment if no additional staff replacement has been provided. Additional leave taken at the end of an assignment in accordance with the firm's leave policy is acceptable as a social cost.

(iv) Cost of Leave

The principles of calculating the cost of total days leave per annum as a percentage of basic salary shall normally be as follows:

$$\text{Leave cost as percentage of salary}^1 = \frac{\text{total days leave} \times 100}{[365 - w - ph - v - s]}$$

It is important to note that leave can be considered a social cost only if the Client is not charged for the leave taken.

(v) Overheads

Overhead expenses are the firm's business costs that are not directly related to the execution of the assignment and shall not be reimbursed as separate items under the contract. Typical items are home office costs (partner's time, nonbillable time, time of senior staff monitoring the project, rent, support staff, research, staff training, marketing, etc.), the cost of staff not currently employed on revenue-earning projects, taxes on business activities and business promotion costs. During negotiations, audited financial statements, certified as correct by an independent auditor and supporting the last three years' overheads, shall be available for discussion, together with detailed lists of items making up the overheads and the percentage by which each relates to basic salary. The IEC-GS/OAS do not accept an add-on margin for social charges, overhead expenses, etc., for staff who are not permanent employees of the firm. In such case, the firm shall be entitled only to administrative costs and fee on the monthly payments charged for subcontracted staff.

(vi) Fee or Profit

The fee or profit shall be based on the sum of the salary, social costs, and overhead. If any bonuses paid on a regular basis are listed, a corresponding reduction in the profit element shall be expected. Fee or profit shall not be allowed on travel or other reimbursable expenses, unless in the latter case an unusually large amount of procurement of equipment is required. The firm shall note that payments shall be made against an agreed estimated payment schedule as described in the draft form of the contract.

(vii) Away from Headquarters Allowance or Premium

Some Consultants pay allowances to staff working away from headquarters. Such allowances are calculated as a percentage of salary and shall not draw

¹ Where *w* = weekends, *ph* = public holidays, *v* = vacation, and *s* = sick leave.

overheads or profit. Sometimes, by law, such allowances may draw social costs. In this case, the amount of this social cost shall still be shown under social costs, with the net allowance shown separately. For concerned staff, this allowance, where paid, shall cover home education, etc.; these and similar items shall not be considered as reimbursable costs.

(viii) **Subsistence Allowances**

Subsistence allowances are not included in the rates, but are paid separately and in local currency. No additional subsistence is payable for dependents—the subsistence rate shall be the same for married and single team members.

UNDP standard rates for the particular country may be used as reference to determine subsistence allowances.

2. Reimbursable expenses

- 2.1 The financial negotiations shall further focus on such items as out-of-pocket expenses and other reimbursable expenses. These costs may include, but are not restricted to, cost of surveys, equipment, office rent, supplies, international and local travel, computer rental, mobilization and demobilization, insurance, and printing. These costs may be either unit rates or reimbursable on the presentation of invoices, in foreign or local currency.

3. Bank Guarantee

- 3.1 Payments to the firm, including payment of any advance based on cash flow projections covered by a bank guarantee, shall be made according to an agreed estimated schedule ensuring the firm regular payments in local and foreign currency, as long as the services proceed as planned.

Firm: Coevolution Institute
Assignment: IABIN PTN


Country: USA
Date: May 3, 2006

Prospective CI's Representations Regarding Costs and Charges

We hereby confirm that:

- (a) the basic salaries indicated in the attached table are taken from the firm's payroll records and reflect the current salaries of the staff members listed which have not been raised other than within the normal annual salary increase policy as applied to all the firm's staff;
- (b) attached on a separate pdf (IABIN CoE Payroll) is a true copies of the latest salary summary of the staff members listed for the semi-monthly payroll;
- (c) the away from headquarters allowances indicated below are those that the Consultants have agreed to pay for this assignment to the staff members listed;
- (d) the factors listed in the attached table for social charges and overhead are based on the firm's average cost experiences for the latest three years as represented by the firm's financial statements; and
- (e) said factors for overhead and social charges do not include any bonuses or other means of profit-sharing.

Coevolution Institute _____
[Name of Firm]



Signature of Authorized Representative

May 3 2006 _____
Date

Name: Laurie Davies Adams _____

Title: Executive Director _____

Prospective CI's Representations Regarding Costs and Charges

(Expressed in US Dollars)

Personnel		1	2	3	4	5	6
Name	Position	Basic Salary per Working Monthly	Social Charges ¹	Overhead (15%)	Subtotal	Proposed Fixed Rate per Working Month	Proposed Fixed Rate per Working Month as a percentage of 1
Staff							
L. Adams	<i>Team Leader</i>	\$5,400	\$76.96	\$821	\$6,299	\$6,299	116%
K. Winter	<i>Bioinformatics Specialist</i>	\$4,466	\$381.56	\$727	\$5574.56	\$5574.56	125%
J. Marks	<i>Project Coordinator</i>	\$3,261	\$381.56	\$546	\$4189	\$4189	128%

DRAFT MEMORANDUM OF COOPERATION

**Memorandum of Cooperation
Between
The Coevolution Institute
and
The Inter-American Biodiversity Information Network (IABIN)
To Formalize the Designation of the Coordinating Institution (CI)
For the Pollinators Thematic Network (PTN),**

This Memorandum of Cooperation (hereinafter “MOC”) is entered into by and between the Coevolution Institute (hereinafter “CoE”) and the **Inter-American Biodiversity Information Network** (hereinafter “IABIN”). CoE is represented by Laurie Davies Adams, Executive Director Coevolution Institute, and IABIN is represented by Mrs. Gladys Cotter, Chair of the IABIN Executive Committee (IEC).

Recalling Initiative 31 of the Plan of Action of the Summit of the Americas on Sustainable Development held in Santa Cruz, Bolivia, in December 1996, which called on the governments of the Hemisphere to take actions “to establish an Inter-American Biodiversity Information Network (IABIN), primarily through the Internet, that will promote compatible means of collection, communication, and exchange of information relevant to decision-making and education on biodiversity conservation, and that builds upon such initiatives as the Clearing-House Mechanism provided for in the United Nations Convention on Biological Diversity”;

Considering that the Rules of procedure adopted at the First Meeting of the IABIN Council Miami, Florida, USA, December 13-14, 1999 designated the IEC to guide effectively the operations of IABIN and to execute the policy decisions of the Council, to execute the decisions of the Council, and to make operational policy decisions and commit network resources to facilitate projects;

Recalling that IABIN was strongly supported in the Ministerial communiqué to the Heads of State and delegations attending the Summit of the Americas which led to the endorsement of IABIN in the April 2001 Québec Presidential Summit Plan of Action.

Advance hemispheric conservation of plants, animals and ecosystems through, as appropriate: capacity building, expanding partnership networks and information sharing systems, including the Inter-American Biodiversity Information Network;

Recalling Article 1 Paragraph 4 of the Rules of Procedures of IABIN which mandates it to participate in developing strategies for biodiversity information management in collaboration with other global and regional initiatives to fulfill its mandate to protect, enhance, and utilize biodiversity information most effectively.

Recognizing the need to cooperate in order to promote coordination and collaboration towards the goal of enhancing global access to biodiversity information in the Americas;
Have agreed as follows:

Article 1
Objective

- 1.1 The objective of this MOC is to establish a framework for collaboration between IABIN and CoE, in which the latter will function as the IABIN Pollinators Thematic Network (PTN) Coordinating Institution (hereinafter “**Pollinators CI**”) to further common goals.
- 1.2 These goals include facilitating the development and implementation of the P TN, based on the priorities for the TN endorsed by the IABIN Council to promote the sharing of data, knowledge, information, technologies, and best practices relevant to biodiversity conservation and sustainable management within the Americas.
- 1.3 The activities undertaken under this MOC will promote the exchange of scientific and technical data and augment scientific and technical information capabilities of the Parties to this MOC and their constituents, as well as promote the participation and involvement of other organizations and institutions in the P TN as envisioned by, but not limited to, IABIN principles and the Proposed Scope for Participation of National Organizations in the IABIN Thematic Networks (Appendix I).

Article 2
Responsibilities of IABIN

IABIN will:

- 2.1 Collaborate with the PTN CI and facilitate their activities under the IABIN framework to enable the sharing of data, knowledge, information, technologies and best practices relevant to biodiversity conservation and sustainable management within the Americas;
- 2.2 Collaborate with the PTN CI in the implementation of activities referred to in Article 1.2, following the guidelines and priorities for the TN endorsed by the IABIN Council;
- 2.3 Participate, as appropriate, in workshops, working groups, and other activities organized by the PTN CI and that are aligned with IABIN’s objectives;
- 2.4 Facilitate, as appropriate, the effective participation of the PTN CI in IABIN activities, including the IABIN Council Meetings;
- 2.5
 - i) Lead the processes to seek out and facilitate funding for the TN, in particular a potential grant from the World Bank/GS/OAS/GEF Project in accordance with the objectives of said project and the fundraising roles established there;
 - ii) ensure and facilitate synergies with the other IABIN TNs;
 - iii) recognize on IABIN’s website and other promotional literature the role of PTN CI as the lead organization in the PTN.

Article 3

Responsibilities of the Pollinators Thematic Network Coordinating Institution

The IABIN PTN Coordinating Institution (PTN CI) will:

- 3.1 Submit an annual work plan pursuant to the establishment of the PTN to be approved by the IEC and implement said plan.
- 3.2 Elaborate and submit to the IEC an annual report of progress of the execution of the annual work plan
- 3.3 Collaborate with IABIN to establish an effective coordination with other IABIN Thematic Networks and all relevant parties in order to ensure the implementation of an overall interoperable network;
- 3.4 Collaborate with IABIN to seek out and facilitate funding for the TN;
- 3.5 In coordination with IABIN, actively promote and encourage the participation and incorporation of other interested organizations and institutions in the PTN activities as set forth in Article 1.3 of this MOC and when needed for specific funding opportunities, create consortia of partners;
- 3.6 Collaborate with IABIN to enable the sharing of data, knowledge, information, technologies, and best practices relevant to biodiversity conservation and sustainable management within the Americas;
- 3.7 Collaborate with IABIN to promote adoption of interoperability standards for the exchange of data and technical information relevant to biodiversity conservation within the Americas;
- 3.8 Collaborate with IABIN in the elaboration, development and implementation of programs pertaining to the promotion and use of biodiversity information and management and decision support tools within the Americas;
- 3.9 Collaborate with IABIN in the promotion of the integration of biodiversity and geospatial data in the development of value-added decision support tools within the Americas;

- 3.10 Participate, as appropriate, in workshops, working groups, and other activities organized by IABIN;
- 3.11 Attend and participate in the IABIN Council Meetings as network resources allow it or complementary funds are obtained;
- 3.12 Promote relevant cooperative research, training activities, technical exchange of specialists, and other opportunities for professional interaction among participants concerned with biodiversity information exchange within the Americas;
- 3.13 Facilitate the effective participation of an IABIN designate in the management of joint activities developed under this MOC;
- 3.14 Ensure that all CI promotional and outreach activities in support of the PTN (web sites, publications, reports, pamphlets, posters, etc.) include the IABIN logo. Logos of the CI and all contributing institutions, as appropriate, should be included as supporting institutions to this IABIN activity;
- 3.15 Operate a website only under the domain name and technical design guidelines to be provided by the Secretariat.

Article 4

Execution

- 4.1. The IABIN Secretariat is hereby designated as the lead for executing IABIN's responsibilities under this MOC. Members of the IABIN Executive Committee (IEC) and IABIN Focal Points (FPs) may also participate directly in the execution of this MOC.
- 4.2. Future annexes may be agreed upon by the parties and included in this Memorandum and will form an integral part of this MOC.
- 4.3. The execution of the potential IABIN GEF Project financial resources and its technical requirements for the establishment of the PTN will be governed by a Coordinating Institution Transfer Agreement with the GS/OAS, as Executing Agency of the "Building IABIN" GEF Project.

Article 5

Disclaimer

- 5.1 Information transmitted by one Party to the other Party under this MOC shall be as accurate as possible, but the transmitting Party does not warrant the suitability or authenticity of the information transmitted for any particular use or application by the receiving Party or by any third party.
- 5.2 The Parties of this MOC declare that they do not form a legal society, joint enterprise or any other kind of merchant society, and that the main purpose of the parties is not to establish a for-profit commercial enterprise. Any kind of duties or taxes or legal or

administrative responsibility that could derive from this agreement will be the individual responsibility of the parties, according to their individual legal status.

Article 6

Planning and Review of Activities

- 6.1 The Parties to this MOC shall designate representatives who, at times mutually agreed upon by the Parties, shall review the activities, products and reports being carried out under this MOC.

Article 7

Settlement of Disputes

- 7.1 Any dispute between the Parties arising out of the interpretation or execution of this MOC or breach thereof shall be settled by direct negotiation. If the Parties to this MOC are unable to reach agreement, the dispute shall be settled through arbitration in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL) as at present in force.

Article 8

Entry into Force, Amendment and Termination

- 8.1 The present MOC will enter into force upon signature by the Representative of the Lead Institution of the PTN CI and the Chair of the IEC and will have a duration of 36 (thirty six) months, after which it can be extended to additional periods as agreed upon by the parties;
- 8.2 This MOC shall remain valid until it is terminated as described under Paragraph 8.5;
- 8.3 Any amendment to this MOC will be effected only on the basis of written consent of the Parties;
- 8.4 This MOC may be terminated by either Party giving at least six-month written notice or shorter period, if mutually acceptable to all Parties. Such termination shall not carry any financial liability to any of the Parties in regard to this specific MOC;
- 8.5 The termination of this MOC shall not affect the validity or duration of projects or other agreements that the PTN CI may have initiated prior to such notification;
- 8.6 Upon termination, the PTN CI shall cease to represent itself as a representative of IABIN or its PTN. In case the CI is unable to continue with the execution of this agreement, all products and materials including but not limited to intellectual property rights, software, databases, website domains and its content, files and hardware, and tools acquired or developed through the implementation of this agreement shall be returned in certified good and workable conditions at no cost to GS/OAS, as Executing Agency of the "Building IABIN" GEF Project.

**THE PARTIES HEREBY EXECUTE THIS MEMORANDUM OF COOPERATION,
EFFECTIVE UPON THE DATE OF SIGNATURE.**

PTN CI

Inter-American Biodiversity
Information Network

Laurie Davies Adams
Executive Director, Coevolution Institute
Date:

Mrs. Gladys Cotter
IABIN Council Chair
Date: