

Danish Ministry of Foreign Affairs  
 The Research Unit  
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## Annual Report Form for research projects

UM j.nr. 104.dan.8.l.206  
 Project no.: 91136

Date of submission:  
 March 28, 2007

The report must be in English and must not exceed 10 pages. The report must be submitted 15 January the following year to the Ministry of Foreign Affairs, electronically to the address: FFU@um.dk. For projects with several partners, the reporting must be based on a mutually agreed text.

**Attachments:**

List of publications

For individual Ph.D. projects: Annual statement from the supervisor on the progress

Additional information, such as internal project reports etc., can be attached as it is found relevant.

Guidelines for filling out the report are attached to the form.

<b>1. Project responsible</b> Professor Ph.D. Henrik Balslev	<b>Address</b> Biologisk Institut, Aarhus Universitet, Ny Munkegade 1540, Aarhus C.	
	<b>Email</b> henrik.balslev@biology.au.dk	<b>Telephone</b> 89424707 (office), 869112294 (private)
<b>2. Financially responsible institution</b> Aarhus Universitet	<b>Address</b> Ndr. Ringgade 1, 8000 Aarhus C., Denmark	
<b>3. Project Title</b>	Biodiversity and Economically Important Species in the tropical Andes (BEISA) – a research collaboration between Bolivia, Ecuador and Denmark	
<b>4. Homepage for the project, if any</b>	www.beisa.dk	
<b>5. Grant (DKK)</b>	Total dkk. 1.256.300 in 2006 (before budget-revision dkk. 1.034.200). Total 2003-2006 dkk. 4.999.200	
<b>6. Project period as approved</b>	Jan.- Sept. 2006 (but extended to Dec. 31, 2006)	
<b>7. Reporting period</b>	2006	
<b>8. Previous annual reports</b> 2005, 2004 and 2003	<b>Date of submission</b> February 15	<b>Period</b> 2005

**A. Does this report contain information that, according to the Guidelines, will require immediate action from the Ministry of Foreign Affairs?**

YES  NO

If yes, please insert a short description and note where it is described in the report?

<p><b>B. During the year, have there been significant changes in the preconditions for the project (changed objectives, time frame, shift in the involved institutions and responsible partners etc.)?</b></p> <p>YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p>	<p>If yes, when was it informed, approved or applied for? (Refer to correspondence).</p>
<p><b>C. Were any specific conditions given for the approval or extension of the project (i.e. in the Letter of Grant):</b></p> <p>YES <input type="checkbox"/> NO <input checked="" type="checkbox"/></p>	<p>If yes, under which of the points in the report is the follow-up on each condition described?</p>

**1. Summary of the project status:**

**1. Summary in English**

BEISA (Biodiversity and Economically Important Species in the Tropical Andes – A research collaboration between Bolivia, Ecuador and Denmark, [www.beisa.dk](http://www.beisa.dk)) is a research collaboration framework aiming to enhance and improve biodiversity research and education at four partner institutions: the Institute of Ecology at the San Andrés University in La Paz, Bolivia, the Catholic University in Quito, Ecuador, the National University of Loja, Ecuador, and the Biological Institute of the University of Aarhus. The present first three-year-phase (BEISA-1) commenced on October 1, 2003, and was anticipated to finish September 30, 2006, but was extended until Dec. 31, 2006. In summary, the project progressed according to plans and objectives both during 2006, and over the entire project-phase (2003-2006). BEISA-1 has upgraded teaching and research regarding the rich biodiversity found in Bolivia and Ecuador, and has given priority to train young promising researchers involving them in active research, including 4 M.Sc. students graduated Nov.-Dec. 2005 in Aarhus, and nine local (first) degree candidates graduated during 2006. The projects last year (2006) were mostly spent processing research data from the previous years and writing publications. Important outputs at the partner institutions were the following: 1) La Paz implemented a newly designed biology curriculum that will improve candidate's capacity to work with natural resource management, and coordinated the edition and published a major book about important native plant resources in the Central Andean region. 2) the herbarium in Quito finished the recompilation of information regarding useful Ecuadorian plants reported in the literature and at herbarium vouchers, and analyzed and organized the information for a catalogue of useful plants (published hard copy and available on the Web from June 2007). 3) UNL analyzed data gathered during a field-study of various forest formations in southern Ecuador, and published results in publications describing local people's uses and dependences on native plant resources. 4) Aarhus collaborated closely with partner-institutions regarding the mentioned outputs, and supported the M.Sc.-students in writing scientific publications based on the M.Sc.-reports presented in late 2005.

BEISA (Biodiversitet og økonomisk vigtige planter i tropisk Andes – et forsknings-samarbejde mellem Bolivia, Ecuador og Danmark, [www.beisa.dk](http://www.beisa.dk)) er et forskningssamarbejdsprojekt, der sigter på styrke biodiversitets-forskning og -uddannelse på de fire partnerinstitutioner: Det Økologiske Institut ved San Andrés universitetet i La Paz, Bolivia, det Katolske Universitet i Quito, Ecuador, Det Nationale Universitet i Loja, Ecuador, og Det Biologiske Institut på Aarhus Universitet. Den første 3-års-fase (BEISA-1) begyndte oktober, 2003, og skulle være sluttet September 2006 men blev forlænget til nytår 2006. Overordnet er projektet, både i 2006 og gennem hele projekt-fasen, gennemført i overensstemmelse med planer og objektiver. BEISA-1 har opgraderet undervisning og forskning vedrørende Bolivia's og Ecuador's rige biodiversitet, og har prioriteret at træne unge lovende forskere ved at involvere dem i aktiv forskning, inklusiv 4 M.Sc. kandidater der fik deres grader i Århus i nov.-dec. 2005, og 9 studenter som i 2006 fik deres første lokale grad. Derudover blev 2006 overvejende anvendt til at behandle data indsamlet de foregående år og at skrive publikationer. Vigtige resultater på de individuelle institutioner var følgende: 1) I La Paz at implementere et ny-udviklet biologi kurrikulum med et antal nye kurser, som vil styrke kandidaters forudsætninger for at arbejde med naturresource forvaltning, samt at redigere og publicere en bog om økonomisk vigtige planteresourcer i den centrale Andes region. 2) herbariet i Quito sluttede indsamlingen af data om anvendte Ecuadorianske planter rapporteret i litteratur og på herbarium etiketter, og analyserede, organiserede og redigerede materialet til et katalog over anvendte planter (tilgængelig som bog og via internet fra juni 2006). 3) UNL analyserede et omfattende data-sæt indsamlet i forskellige skovtyper i det sydlige Ecuador, og beskrev i publikationer befolkningens anvendelse og afhængighed af plante-resourcer. 4) Aarhus samarbejdede tæt med partner-institutionerne om de nævnte resultater, og støttede de 4 M.Sc. kandidater i at skrive videnskabelige artikler baseret på deres tesis-rapporter fra 2005.

## 2. Status – project objectives:

There have not been significant changes in risks and assumptions, and it has not been necessary to change the objectives. Here we repeat the objectives from the *Amendment to Project Document*, dated March 4, 2004.

**Overall objective.** Bolivia and Ecuador have improved research and educational capacities regarding the diversity, use and management of their native flora and fauna to international standards, and exploit national and internationally produced information to protect, use and manage their natural resources for the well-being of their citizens. **Immediate objective 1).** Project partners have improved university education and developed independent capacity to research the use and management of flora and fauna, and universities and other relevant national institutions have developed capacity to elaborate, negotiate and implements projects concerning research and management of biodiversity with third partners: **Immediate objective 2).** Project partners record, describe and publish documentation regarding flora and fauna to local end-users as well as to researchers, and in this process take advantage of modern IT and exploit globally distributed biodiversity data accessible in international databases and informatics facilities. **Immediate objective 3).** Project partners and other national institutions apply research conducted with local communities, and national and international biodiversity documentation, to protect, use and manage their flora and fauna:

BEISA-1 has contributed significantly to all the mentioned objectives (see outputs), but full realization is not realistic after one project-phase emphasizing training of human resources, as the starting-point for a capacity building over consecutive project phases. The *Amendment to the Project Document* included a survey of the anticipated four project phases for each of them listing the *Major outputs (milestones) before next phase*. The outputs listed after phase 1 were the following:

- First M.Sc. candidates graduated in Aarhus,
- Project partners have contributed to upgrade Biology Curriculum at UMSA in Bolivia,
- Modern IT including use of international databases integrated in local biodiversity research
- Inventory of economically important plant species in Ecuador completed
- Use and management of specific economically important plant species investigated
- Data regarding economically important plants published nationally and internationally
- Continuous exchange of experience at various levels between partner institutions

BEISA-1 has complied with the mentioned outputs (mile-stones)

## 3. Status – activities and results:

### Output 1.1: Improved teaching and research capacity at UMSA

A main activity has been to design and implement a new biology curriculum aiming to improve candidate's capacity to manage natural resources. It included new courses regarding Economic Botany, Natural Resources Conservation and Management and Natural Products Chemistry, and was first taught in 2006. Collaboration with the FoMaBo-EnReCa project continued with the two projects holding common workshops and courses training researchers and students in elaborating projects, writing proposals and publications and soliciting external funding. In early 2006 was undertaken an institutional analysis of the research environment at *Instituto de Ecología* of UMSA, mainly aimed for guiding research capacity building in the following project phase.

### Output 1.2: Undergraduate students trained to their first degree at home-institution

During 2006 three (Bolivia) and 6 (Ecuador) undergraduate students received their local first degree (licenciatura, ingeniero agrónomo or forestal) after writing thesis-reports based on field-data gathered during participation in BEISA-financed research. Two local M.Sc. students at UMSA and one in Loja will in mid-2007 get their degrees equally based on field studies with BEISA (in 2006).

### Output 1.3: Train 4 Bolivian and 1 Ecuadorian student to M.Sc. degree in Aarhus

In November-December 2005 the four Bolivian students finished their M.Sc. degrees in biodiversity research and informatics', and the Ecuadorian student commenced a Ph.D.-study at the Aarhus University before completing her M.Sc. degree. During 2006 the M.Sc. candidates collaborated with their advisors in Aarhus in writing scientific publications based on the results in their Thesis-works.

### Output 1.4: Upgrade reference collection at "Colección de fauna" at UMSA, La Paz

Dkk. 40.000 was spent on equipment and materials that will help to preserve zoological collections of fishes, amphibians, reptiles, and mammals.

### Output 2.1: Upgrade IT-infrastructure and capacity of participating institutions

At PUCE nine staff-members and students were trained in database management, information search from internet web sources, and advanced digital camera. Staff from PUCE continued to support researchers and students at UMSA in improving and expanding a recently installed (2005) database regarding selected categories of economic plants in Bolivia. In Bolivia the M.Sc. candidates educated in Denmark trained students and staff at their home-institutions in use of databases and other advanced IT.

**Output 2.2: Project partners take advantage of global biodiversity data facility networks**

At PUCE the new web site is ready and will soon be available on the internet (May 2007). The site presents information regarding all plants used in Ecuador including a digital photo of each species. In Bolivia the national herbarium at UMSA has become member of an Andean network.

**Output 2.3: Results published to a broad spectrum of end-users**

Appendix A lists publications published in 2006; and considering that 2006 was the last year of BEISA-1, we have included some works published in 2007 and in publication. Prevalent are two major books elaborated during BEISA-1:

*de la Torre et al* (in press) include information about the uses of more than 5000 plant species in Ecuador, their local names and the ethnic groups that apply them. Introductory chapters summarize the geographical, ecological and ethnical characteristics of Ecuador, and the major categories of plant-uses. About 20 researchers have contributed to this comprehensive work in the final revision before the anticipated publishing in June 2007. The data-base will also be uploaded to the internet, providing full information regarding individual species, and digital photos of voucher specimens. The webpage will be free of charge, but a registration procedure will keep some control of the use of information.

*Moraes et al.* (Dec. 2006) include 32 chapters regarding economic plants in the Andean region of Ecuador, Peru and Bolivia, distributed at sections describing 1) the geographical context, 2) the ecosystems, 3) the study of and 4) the use of plants, 5) important categories of plant-uses, and 6) the legal context for exploiting plant resources. Chapters are partly written by BEISA-researchers and partly by other experts and colleagues. The contributions of the former are listed below (see Scientific Contributions in Spanish).

The four M.Sc. candidates educated in Aarhus have prepared contributions for peer-reviewed scientific journals (in English), and BEISA-researchers have co-authored other peer-reviewed papers dealing with biodiversity in the Andean region. A good number of scientific publications have been written in Spanish, including 14 chapters in *Moraes et al.* (cited above). Eight contributions present results from in southern Ecuador including three in *Moraes, et al.*, four in the journal *Lyonia* published after an Botanical Congress in Ecuador, and a recent paper in *Arnaldoa* (Trujillo, Peru). The authors that have worked in southern Ecuador prepare papers in English regarding the uses and the diversity of trees for Economic Botany and Biodiversity and Conservation, respectively. One of the first degree students prepared a booklet about the medicinal plants (and animals) used by the indigenous group she had studied. The herbarium at the Catholic University in Ecuador (PUCE) has elaborated materials aimed for the general public, describing the biodiversity of Ecuador and their research they undertake, including a 2006-calendar and a folder distributed with Ecuador's leading newspaper (*El Comercio*).

Appendix 1 also includes a list of presentations given by BEISA-researchers at conferences and symposia in Bolivia, Ecuador and elsewhere.

**Output 3.1: Researchers have investigated economically important plants**

The year mostly served to process and analyze data and to publish results. In La Paz the principal focus of the BEISA-research has been economically important palms particularly in the influence area of the Madidi National Park where both mestizo and indigenous communities have been studied. A first degree-student investigated the palm *Parajubaea torallyi* endemic to a small area in central Bolivia. In Loja data gathered in mestizo communities located in dry and montane forests served to analyze the importance of extracted forest products, factors affecting people's knowledge, and transfer of knowledge between population segments and generations. In Quito the researchers finished gathering information regarding the uses of plants in Ecuador, and organized this material for publication in a "Catalogue of useful Ecuadorian plants" (soon published hard copy and on the Web). The work resulted in nearly 50.000 use-records regarding more than 5.000 plant species: Lucia de la Torre analyzing these data in Aarhus for her Ph.D.-project *Determinants of plant use diversity among cultural groups of Ecuador*.

<p><b>4. Changes concerning the relevance to Danish development Co-operation and to partner country development.</b></p>
<p>There have not been significant changes.</p>
<p><b>5. Co-operation with users at all levels concerning the dissemination and application of the project's results:</b></p>
<p>Results have been disseminated to users at all levels ranging from international researchers to rural communities and the general public (Appendix 1). In the project areas in Bolivia both M.Sc.-candidates and local (first-degree) students returned to the areas where they made their research and presented and explained their results at workshops held in local communities. In the Madidi-area the BEISA-researchers collaborated with a project (<i>Proyecto Palmeras</i>) commercializing, transforming and marketing fruits from five common palm species, aiming to improve livelihoods and incomes in local communities under the bio-commerce concept. BEISA provided important inputs to <i>Proyecto Palmeras</i> regarding the composition and dynamics of palm-populations, potential uses of palms and management. Results have also benefited other organization working with sustainable management in the influence area of the Madidi national park (e.g. Conservation International, Bolivia; and local municipalities).</p>
<p><b>6. Co-operation with other researchers, international networks and research initiatives within the field</b></p>
<p>At the international level the project partners have continued their collaboration with European and U.S.-based institutions studying the rich natural resources of the Andean region (e.g. Missouri Botanical Garden, Kew Botanic Garden, etc.). In Bolivia the BEISA-project has established close relations with the Agronomy Faculty at the San Francisco Xavier University in Sucre. One of the Bolivian M.Sc. candidates (A. Carretero) and also one of the first degree student's came from the Sucre herbarium. Relations are particularly close between Sucre and the project partner in Loja in southern Ecuador. Both institutions are national universities located in marginal parts of their respective countries, and the research undertaken by <i>Aguirre et al</i> in Loja are similar to research undertaken by <i>Carretero et al</i> in Sucre. Both groups focus at local people's exploitation of resources from native vegetation, and they have exchanged experiences regarding field methodologies and the analysis of field data.</p>
<p><b>7. Obtaining of the necessary permits and authorizations according to current legislation in Denmark and partner country</b></p>
<p>The project-partners in Ecuador and Bolivia got the necessary authorizations for conducting research in protected areas, among indigenous people, etc. There has been no need for legal permits in Denmark.</p>
<p><b>8. Progress in relation to the specific requirements for each project type as given in the application and project document:</b></p>
<p><i>Research quality:</i> Publications are listed in Appendix 1.</p> <p><i>Institutional issues:</i> The Ecuadorian partners were supported by previous EnReCa-projects (1990-2002), and it was only envisioned to work with institutional issues at the Bolivian partner in La Paz (UMSA). Focus has been at upgrading the educational capacity, infrastructure and IT-capacity, and there was undertaken an institutional analysis (<i>Moraes, M. et al. Febrero 2006. Desarrollo Institucional y ámbio de la Investigación. Carrera de Biología/Instituto de Ecología, UMSA, 24 pages, four appendices</i>).</p> <p><i>Project organization, including procedures for decision-making and co-ordination:</i> These aspects were described in the Amendment to the Project Document submitted to DANIDA at March 4, 2004. The project has been executed accordingly.</p> <p><i>The strategy for capacity strengthening:</i> Based on the abovementioned institutional analysis it was envisioned to define a strategy for capacity building early in BEISA-2.</p> <p><i>Partnership aspects:</i> There has been a positive collaboration between the four partner-institutions, and full transparency both regarding economic and technical aspects.</p>
<p><b>9. Status concerning the sustainability of the results achieved</b></p>

BEISA-1 results and the newly established data-bases with biodiversity-information will continue to advance the investigation of economically important plants in the project region. In La Paz UMSA will continue teaching biology students according to the new curriculum. The main preoccupation regarding the sustainability may relate to the employment of the four M.Sc. students educated in Aarhus. There were no permanent job-openings for them at their institutions right away. In the meantime they have managed to find relevant employment applying the expertises learned during their Master-studies. In Sucre 1) *Alain Carretero* has undertaken projects and consultancies as associated researcher in the herbarium; most recently a study of local plants with economic potential for bio-commerce for the Agricultural Sector program of DANIDA. Very recently (March 2007) the University in Sucre offered him employment as researcher and teacher (docente). 2) *Narel Paniagua* currently work for a private company (MACOGASY DDY based in Spain) being in charge of a large program (one million euro) certifying forest concessions and managing non-timber forest products in collaboration with native communities in Santa Cruz (TCO's and ASL's). 3) *Carla Maldonado* has from Oct. 2006 to March 2007 worked for Conservation International, Bolivia; directing a territorial planning program (Ordenamiento Territorial) in northern La Paz. Before, and supposedly afterwards, she taught classes at her home institution (carrera de biología, UMSA). 4) *Adriana Sanjines* live in France after marrying a French citizen. She participates in French-financed research in French Guyana.

**10. "Others":**

**11. Lessons learnt**

The importance of institutional issues was not sufficiently well understood from the start of BEISA-1. Therefore it took too long before this issue was analyzed properly in La Paz, and the elaboration of a strategy for capacity building (at UMSA) was postponed to the beginning of BEISA-2.

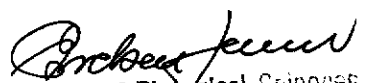
Signatures:



(Responsible project leader as well as responsible institute)

27.3.2007:

*J. Jørgen Bundgaard*  
instituteder

  
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## Appendix 1. PUBLICATIONS and PRESENTATIONS

Contributions are listed under the headings 1) Books, 2) Peer-reviewed scientific contributions (based on M.Sc.-thesis works), 3) Others peer-reviewed contributions, 4) Scientific contributions in Spanish, 5) Popular works, and 6) Presentations and Proceedings (abstracts).

### 1. Books

- Catálogo de plantas útiles en Ecuador. (in press). de la Torre, L., Navarrete, H., Muriel, P., Macía, M.J. & Balslev, H. (eds). Herbario QCA-Pontificia Universidad Católica del Ecuador y Departamento de Botánica Sistemática de la Universidad de Aarhus, Dinamarca. Quito. 840 pages.
- Botánica Económica de los Andes Centrales. 2006. Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz. 557 pages.

### 2. Peer-reviewed scientific contributions (based on M.Sc.-thesis works)

- Carretero, A. Byg, A., Balslev, H. & Borchsenius, F. Traditional knowledge about useful plants in the Tucumano-Boliviano forest. *Economic Botany*.
- Maldonado, C. & Borchsenius, F. Revision of *Elaeagia* (Rubiaceae). *Annals of the Missouri Botanical Garden*.
- Paniagua, N. C., Byg, A., Svenning, J.-C., Moraes, M., Grandez, C. & Balslev, H. Diversity of palm uses in the western Amazon. *Biodiversity and Conservation*.
- Sanjinez, A. , Svenning, J.C., Moraes, M. & Balslev, H. Ecology of Palms in north-western Bolivia. *Ecotropica*.

### 3. Other peer-reviewed contributions

- Byg, A. & Balslev, H. Palms in indigenous and settler communities in southeastern Ecuador: farmers' perception and cultivation practices. *Agroforestry Systems* 67: 147–158.
- Byg, A., Vormisto, J. & Balslev, H. Using the useful: characteristics of used palms in south-eastern Ecuador. *Environment, Development and Sustainability* 8: 495–506.
- Kvist, L.P., Christensen, S.B., Rasmussen, H.B., Mejía C., K. & Gonzalez H., A. Identification and evaluation of Peruvian plants used to treat malaria and leishmaniasis. *Journal of Ethnopharmacology* 106: 390-402.
- Normand, S., Vormisto, J., Svenning, J.-C., Grandez, C. & Balslev, H. Geographical and environmental controls of palm beta diversity in paleo-riverine terrace forests in Amazonian Peru. *Plant Ecology* 186: 161–176.
- Poulsen, A.D., Tuomisto, T. & H. Balslev, H. Edaphic and floristic variation within a 1-ha plot of lowland Amazonian rainforest. *Biotropica* 38: 468–478.

### 4. Scientific contributions in Spanish

- Aguirre, Z. & Kvist, L.P. Composición florística y estado de conservación de los bosques secos del sur-occidente del Ecuador. *Lyonia* 8(2): 41-67 [on line].
- Aguirre, Z., Kvist, L.P. & Sanchez, O. Bosques secos en Ecuador y su diversidad. Pp. 162-187 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Aguirre, Z. Linares-Palomino, R. & Kvist, L.P. Especies leñosas y formaciones vegetales de los bosques estacionalmente secos de Ecuador y Perú. *Arnaldoa* (published March 2007)
- Balslev, H. Introducción, pp. iii–ix en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Borchsenius, F. & Moraes, M. Palmeras andinas. Pp. 412-434 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.

- de la Torres, L., Muriel, P. & Balslev, H. Etnobotánica en los Andes del Ecuador. Pp. 246–267 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- García, E. & Beck, S.G. Praderas andinas y pumas. Pp. 51-76 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Granda, V. & Guamán, S. Composición florística, estructura endemismo y etnobotánica del bosque Algodonal, canton Macará, provincial de Loja. *Lyonia* 10(2): 37-46 [on line].
- Hjortsø, C.N., Jacobsen, J.B., Kamelarczyk, K.B.F. & Moraes, M. La economía forestal en Bolivia. Pp. 533-557 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Kvist, L.P. & Moraes, M. Plantas psicoactiva. Pp. 294-312 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Kvist, L.P., Sanchez, O. & Aguirre, Z. Bosques montanos bajos occidentales en Ecuador y sus plantas útiles. Pp. 205-223 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Kvist, L.P., Skog, L.E., Amaya-Márquez, M. & Salinas, I. Las Gesneriaceae de Perú. *Arnaldoa* 12 (1-2): 16-40.
- Jørgensen, P.M., Ulloa, C. & Maldonado, C. Riequesa de plantas vasculares. Pp. 37-50 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- León, M., Cueva, P., Aguirre, Z. & Kvist, L.P. Composición florística, estructura, endemismo y etnobotánica del bosque nativo “El Colorado”, en el cantón Puyango, provincia de Loja. *Lyonia* 10(2): 105-115 [on line].
- Moraes, M., Balslev, H., Kvist, L.P., Borchsenius, F., Navarrete, H. & Aguirre, H. El proyecto BEISA, una oportunidad para investigación y capacitación en los Andes tropicales. *Arnaldoa* 12 (1-2): 146-151.
- Navarrete, H., León, B., Gonzales, J., Aviles, D.K., Salazar, J., Mellado, F., Alban, J. & Øllgaard, B. Helechos. Pp. 385-411 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Sanchez, O., Kvist, L.P. & Zhofre, A. Usos maderables y no maderables de los bosques secos de la provincia de Loja. *Lyonia* 10 (2): 73-82 [on line].
- Sanchez, O., Kvist, L.P. & Aguirre, Z. Bosques secos en Ecuador y sus plantas útiles. Pp. 188-204 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Sanjinés, A., Øllgaard, B. & Balslev, H. Frutos comestibles. Pp. 329–346 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Vidaurre, P.J., Paniagua, N. & Moraes, M. Etnobotánica en los Andes de Bolivia. Pp. 224-238 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.
- Øllgaard, B., Sanjinés, A. & Balslev, H. Frutos comestibles. Pp. 329-346 en Moraes, M., Øllgaard, B., Kvist, L.P., Borchsenius, F. & Balslev, H. (eds), Plural Editores, La Paz, 557 pages.

## 5. Popular works

- Gabriela Aguirre. 2006. Medicina tradicional de las comunidades indígenas del Río Quiquibey, Boliva. Fundación PRAIA. 135 pp.



## 6. Presentations and Proceedings (abstracts)

- Aguirre, Z., Composición florística y estructura de bosques estacionalmente secos en el sur-occidental de Ecuador. Pp. 10 en Resúmenes de XI Congreso Nacional de Botánica, Set. 18-21, Universidad Nacional del Altiplano, Puno.
- Aguirre, Z. Resultados de BEISA-Loja, Simposio sobre Investigación en la region sur del Ecuador, Nov. 7-9, Universidad Nacional de Loja
- Balslev, H. Palms and palm communities in the western Amazon. Annual Meeting of the Department of Biology, Aarhus University, 5 May 2006.
- Balslev, H. Ethnecology of west Amazonian Palms, invited speaker, 6th International Workshop on Biodiversity Conservation and Utilization, Beijing China, 22–24 May 2006.
- Balslev, H. Palms and palm communities around Iquitos, Peru. Contributed talk. 6th meeting of the European Network of palm Scientists, 27-28 May 2006, Geneva, Switzerland.
- Balslev, H. Uses and management of Amazonian palms. Invited lecture. University of München, Germany. 31 May 2006.
- Borchsenius, F. Diversity and Uses of Andean Palms, The 6th EUNOPS Meeting, May 5, Geneva.
- Carretero, A., Borchsenius, F., Balslev, H. & Kvist, L.P. Factores que afectan al conocimiento tradicional de uso de plantas útiles en el bosque Tucumano-Boliviano. Pp. 45. III Reunión Nacional sobre Investigación Forestal. 19-21 de Abril, Santa Cruz, Bolivia
- Carretero, A., Byg, A., Borchsenius, F., Balslev, H. & Kvist, L.P. Plantas útiles y conocimiento tradicional en el bosque Tucumano-Boliviano. 11<sup>th</sup> Nordic Meeting on Neotropical Botany. Aug. 10-12, University of Aarhus.
- Kvist, L.P., Aguirre, Z. & Sánchez, O. Pp. 18 en Resúmenes de XI Congreso Nacional de Botánica, Set. 18-21, Universidad Nacional del Altiplano, Puno.
- Moraes R., M. Flora de palmeras de Bolivia en un contexto neotropical. Pp. 13 en Resúmenes de XI Congreso Nacional de Botánica, Set. 18-21, Universidad Nacional del Altiplano, Puno.
- Moraes R., M., B. Oellgaard, H. Balslev, F. Borchsenius & L.P. Kvist. Plantas económicamente importantes de los Andes de Bolivia, Perú y Ecuador: Un estado actual de conocimiento. Pp. 299 en Resúmenes de XI Congreso Nacional de Botánica, Set. 18-21, Universidad Nacional del Altiplano, Puno.
- Moraes R., M. Especies de palmeras de Bolivia con potencial económico. Pp. 477 en Resúmenes de IX Congreso Latinoamericano de Botánica, Jardín Botánico Nacional, Santo Domingo.
- Moraes R., M. Influencia biogeográfica en la diversidad de palmeras nativas de Bolivia. Pp. 528-529 en Resúmenes del IX Congreso Latinoamericano de Botánica, Jardín Botánico Nacional, Santo Domingo.
- Paniagua, N. Factores que determinan el conocimiento y el uso de las palmeras en la Amazonia occidental. Pp. 105. III Reunión Nacional sobre Investigación Forestal. Abril 19-21, Santa Cruz, Bolivia
- Paniagua, N. III Pp. 106. Diversidad, densidad, distribución y uso de las palmas en la region del Madidi, noreste del departamento de La Paz, Bolivia. Reunión Nacional sobre Investigación Forestal. Arbil 19-21, Santa Cruz, Bolivia