

**College of the Rockies – Canadian International Development
Agency
Youth International Internship Project**

Final Intern Project Report

**Wildlife Programme Assistant
Iwokrama International Center for Rainforest Conservation
and Development, Guyana**

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Produced by Gretchen Prystawik

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1.0 INTRODUCTION

1.1 Internship Project Background

Iwokrama International Center is divided into five Units (Forestry, Wildlife, Ecotourism, Social Science, and Geographical Information Science) and has frequently had international interns involved with all Units in the past. The Wildlife Unit has perhaps the most involvement with international organizations and thereby interns, because its director, Dr. Graham Watkins, has sought external funding for all the projects that the Wildlife Unit undertakes. This has enabled the Unit to be financially independent of Iwokrama and for many of its projects to be more successful at the implementation phase than projects initiated by other Units.

The internship offered to me when I first arrived was focused on monitoring the effects of logging roads and logging, or forest fragmentation, on tapirs (*Tapirus terrestris*). However, upon arrival, it was evident that this project was not feasible. Firstly, the camera traps which were integral in establishing tapir inventory, migration patterns, and territory were all broken and had to be sent away for repairs. No funds were available to purchase new cameras. Next, the Forestry Unit is far from ready to begin logging as they have neither a forest inventory, nor a management plan or forest development plan to direct forestry operations. Therefore, no portions of the tapir study were possible.

Instead of working with tapirs, Dr. Watkins assigned me the task of implementing a Forest Impact Monitoring System proposed by a consultant's report (Forest Impact Monitoring Protocols and Research Requirements for their Implementation, Andrew Grieser Johns, 2002). The proposed monitoring system is very comprehensive and is expected to take years to implement. However, several parts to this system were immediately "do-able" and fell into my responsibilities.

Because the Monitoring System was not entirely ready to be implemented (funding not yet available), I was also assigned to help out with whatever projects the Field Station and Wildlife Unit were working on. This enabled me to assist with Arapaima gigas Fish Stock Management and Assessment on the Rupununi River, Climate Change Permanent Sample Plot establishment at Three Mile Creek, Canopy Walkway Understory Bird Surveys at the Canopy Walkway, and the Aquarium Fish Pilot Project on the Rupununi River. In my spare time, I worked on a draft Management Plan for the Canopy Walkway.

1.2 Intern Background

I joined the Wildlife Unit with greater experience and confidence in my forestry skills and background than my wildlife knowledge or expertise. However, the challenge has been very rewarding and I feel that I was well prepared for the position.

An introductory field course in Costa Rica to tropical ecology (while at Queen's University) left me aware of the extent of the diversity that I might encounter in the

Guyanese rainforest. Most importantly, I feel my experience working with groups and teams, and with Indigenous People in Canada, through my forestry education and work experience, was the best preparation for the challenges that I encountered in this working environment. Theoretical concepts (learned at the University of Northern British Columbia towards a Forestry degree) and practical as well as technical skills (learned at Selkirk College towards a Forestry Technology diploma) helped me to implement my work. Finally, perseverance, sweat, creativity, determination, and most importantly, a positive attitude, learned in all field-based employment situations, helped me to work cooperatively with others and find ways to work together around obstacles.

1.3 Overview of Each Project Phase

The project can most simply be divided into the Conceptualization or Preliminary Phase and the Implementation Phase. (A Follow-Up Phase might be possible if I return to Iwokrama on my own as a volunteer at the beginning of April after a short time away. This phase will not be described in detail as it may not be possible because of time constraints and is a personal endeavor.)

The Conceptualization Phase of the project was very much inter-active. I was assigned the project by Dr. Watkins and tried to become familiar with Iwokrama and its past, as well as the direction that this project would take the organization. I discussed the project requirements and objectives individually with all the Rangers, Boat Captains, and vehicle Drivers at Iwokrama as well as with other Wildlife Unit staff. All had been involved in failed monitoring systems in the past and had valuable ideas about how to design a new system to make it more user-friendly and to ensure it withstood the test of time. Monitoring forms and tools were drafted, tested, and modified. This first phase took from my arrival at the Field Station on the 20th of October, 2002, until my departure for Christmas holidays on December 15th, 2002. I helped with the Arapaima Fish Stock Assessment and Permanent Sample Plot project in November, and the Canopy Walkway Bird Surveys in December.

The Implementation Phase of the monitoring system began upon my return from Christmas holidays on the 8th of January, 2003. Draft monitoring report form booklets were printed and bound and files were created to store information for a future database. Dr. Watkins visited the Field Station on the 15th of January and held meetings with those employees actually conducting monitoring activities. He introduced the Forest Impact Monitoring scheme and its role in adaptive management. The remainder of this phase was spent monitoring and translating the recorded data to digital files, and developing ways to improve the system. I assisted with the Aquarium Fish Pilot Project in February.

1.4 Overview of Work Location and Living Arrangements

Almost the entire internship was spent at the Iwokrama Field Station (FS) which is located about 250 km and approximately five hours drive from Georgetown, along the highway to Brazil. The FS is located about two kilometers down the Essequibo River from the highway crossing and is accessible by river or by road. The village of Fair View

is a 25 minute walk, 10 minute speedboat ride, or 30 minute paddle upriver of the FS. Very few things are available in Fair View but soap, soft drinks, alcohol, cigarettes, batteries, honey, some crafts, and matches can usually be found.

The FS is a well-equipped facility with all modern amenities and luxuries. There is a generator which powers lights and computers and operates from 8 AM to Noon, and from 5 PM until 11 PM daily. A kitchen and kitchen staff prepare three meals a day with capacity to cater to special dietary needs including vegetarians. (Limited fresh vegetables are available and no fresh fruit is available.)

As interns, we were housed in an extremely comfortable bunk-house style female dormitory. There were eight separate, individual rooms with bed, mosquito net, chair, and table in each room. The verandah is perfect for a hammock and I chose to sleep out there every night to take advantage of the breeze and the night sounds of the rainforest (frogs, crickets, birds, and howler monkeys). Flush toilets, sinks, and cold water showers were adjacent to the rooms. All laundry was done by hand with clothes lines available for drying (buckets were in short supply and clothes pegs are not supplied). Rainwater was fit to drink but bottled water was also usually available, even for staff. In the dry season, creek water was trucked-in to supplement rainwater.

All FS staff was extremely kind, generous, and concerned with our happiness, well-being, and safety. We were warned that we would not get special treatment and that we would be treated like staff. Most people were very cooperative and helpful!

Two trails lead into the forest from the FS compound which can easily be explored (with a buddy). The FS is located in a Mora forest with other forest types nearby. Many species of birds, amphibians, mammals, reptiles, and insects can be seen at the FS or on foot. Canoes were also available (but there are not enough paddles) to explore the river. Swimming is usually possible in the Essequibo right at the FS landing except when visiting Black caiman pass in search of new territory. The FS Manager or his delegate was to be informed at all times of our location. Maintaining a comfortable degree of independence was usually possible. Given the number of people living and working from the FS, and the military background of the Managers, the feeling is quite regimented and institutional, but this became evident only upon longer experience there.

2.0 WORK EXPERIENCE

2.1 Project Name, Start Date, End Date

Forest Impact Monitoring

October 16, 2002

March 5, 2003

2.2 Project Objectives

To implement the Forest Impact Monitoring Protocols and Research Requirements for their Implementation, by Andrew Grieser Johns, 2002.

2.3 Work Accomplished

A Ranger Monitoring Work Group was created with Julian Fraser, Ron Allicock, and Henry James. They are the FS staff directly responsible for maintaining and implementing the System and liaise with Dr. Graham Watkins and Sambhu Hemchandraught, who has taken over my role (but is also Georgetown-based).

A Monitoring Target Species List was drafted (see Appendix A) of economically, ecologically, and socially-tourist important species. Monitoring forms and booklets were created which are to be used to record these species each time a Ranger leaves the FS to complete any Ranger duties (monitoring, patrols, tourist guiding, traveling, establish plots, other research or reconnaissance -based activities). (See Appendix A).

Drivers were given tape recorders and began recording all target wildlife species. Tapes were transcribed once full onto forms (see Appendix A). Fish Consumption Records were kept of fish taken out of the Essequibo River to feed FS staff and guests. Rain fall was recorded daily and a budget was proposed to purchase basic weather-recording equipment (thermometers, rain gauges, psychrometers). A river gauge was talked about to monitor the depth of the Essequibo River but funding does not exist.

All monitoring data were entered into files that will form a database to provide for the following reports: Distribution and Abundance Maps, Graphical Changes Over Time – Behavior & Numbers, Species Lists, Correlated Changes Over Time, Infraction Records, Size Distributions, Impact Assessments, Compatible Data Sheets.

2.4 Project Challenges

In the latter part of the Conceptualization Phase and during the entire second Implementation Phase, lack of sufficient funding for all field-based activities became a real challenge. FS staff that had banked-time-off chose to take their leave in case Iwokrama does not receive additional funding and cannot give them their due vacations. This limited the amount of Rangers on duty at the FS at any one time. Often, Rangers were only available for tourist guiding. Employment uncertainty also decreased staff moral and created significant stagnation. This was amplified by cash shortages which restricted fuel and food availability for field work. Vehicular transportation was also restricted because of limited vehicles and their dedication to tourist transport.

Another challenge came from the alienation of the FS staff due to past top-down decision-making (previous monitoring systems which failed). The FS is also very much isolated from the head office with few of the Unit heads ever visiting. There is no email or internet connection between the head office in Georgetown and the FS, only radio communication. It seems that many people in town underestimate the isolation and lack of functioning (computers) and limited resources (staff, vehicles, boats, fuel, and food) available at the FS. This alienates the FS further and makes it more difficult to

coordinate activities, organize work, and ensure continuity of projects and their success at implementation.

2.5 Project Contacts

Dr. Graham Watkins

Iwokrama International Center for Rainforest Development and Conservation

P.O. Box 10680, Georgetown, Guyana, South America

594-225-1504

g Watkins@iwokrama.org (ggwatkins@hotmail.com)

Sambhu Hemchandranauth

Iwokrama International Center for Rainforest Development and Conservation

P.O. Box 10680, Georgetown, Guyana, South America

594-225-1504

hsambhu@iwokrama.org

2.6 Project Sustainability

Iwokrama has been in operation since 1996 and has received millions of dollars in international funding. This year, in March 2003, much of this funding ran out without commitments from past donors to continue funding. This crisis has forced the organization to re-examine its direction and look to become a self-sustaining, economically viable, not-for-profit organization. Obviously, this is a difficult time for an organization accustomed to full coffers and liquid budgets. Much uncertainty still exists as to the future of Iwokrama. Given that the organization as a whole is in jeopardy of collapse, the Forest Impact Monitoring project is also in jeopardy. However, as mentioned earlier, the Wildlife Unit under Dr. Watkins is almost totally independent of the broader organization. It will be a challenge to maintain the monitoring project without the broader support of Iwokrama to complete administrative functions (including maintaining staff and the FS, computer support, etc.) but it may be possible.

Past monitoring systems have not been sustainable and were examined to improve this latest attempt. Rangers commented that they had not been involved with developing previous monitoring schemes and so they did not know the purpose, function, or overlying motivation for the project. As Rangers were involved in this process from the beginning, and as three Rangers (Julian Fraser, Ron Allicock, and Henry James) are directly responsible to Dr. Graham for maintaining the system, I believe they will have more interest in its success and sustainability. The project also gives them a large degree of flexibility in developing their own work-plans and schedules and leaving the FS to go on river and road patrols. This freedom may help to encourage the Rangers to continue with the project when I am gone.

Finally, Sambhu Hemchandranauth, formerly working on the tapir project, has taken over this project while he is waiting for his camera traps to be repaired and for his project to continue. He is primarily office/Georgetown based but will be a helpful liaison for the

Rangers. Ordering supplies, answering questions, digitizing data, and managing the database can more easily be accomplished by Sambhu.

Ideally, this internship would be extended for another 6 months and Iwokrama will receive funding so that all the work can be implemented. As it stands now, the work may sit on a computer file somewhere only to be repeated by another intern in a few years when Iwokrama starts under a new mandate.

2.7 Project Promotion

This project has only been promoted internally within Iwokrama when Dr. Watkins visited the FS in January 2003 to introduce the Forest Impact Monitoring System to FS staff.

2.8 Plans for the Future

This experience has raised several questions about future career and education directions. As prior to my internship, I was still more interested in Sustainable Forest Management (SFM) than traditional ideologies and forestry paradigms. I believe that this internship has revealed the difficulty in implementing any kind of community-based project when it is not truly community-based. (Iwokrama is run from Georgetown by international donors who pay United Nations equivalent salaries to office workers but Guyanese wages to field and community-based staff). I have learned that grass-roots endeavors may be the best-suited to meet the needs of local communities. They also have the best chance of success at implementation.

In the future, I would love to continue working with Indigenous communities in Canada and around the world on other SFM initiatives. This experience has reinforced my desire to get a Master's Degree in Conflict Resolution or Leadership and Training and becoming a Registered Professional Forester in British Columbia. I am toying with the idea of applying for a two-year VSO job in West Africa next winter as a forester.

2.9 Comments on the Project

As with any conservation organization, the mandate or mission statement often sounds incredibly noble and conscientious. From my perspective, however, the implementation of Iwokrama's mission statement has been somewhat troubled and miss-guided. The organization is incredibly top-heavy with HUGE amounts of money being spent in Georgetown with few funds left-over for the forest or the involved local communities. Monitoring is an integral way of measuring the success of any organization or endeavor and providing guidance towards improving and streamlining management. This Forest Impact Monitoring project was (as is) extremely necessary and useful and can hopefully assist in guiding Iwokrama in the future.

If the College of the Rockies wishes to continue working in Guyana, I believe interns could be better placed with local communities. The North Rupununi District

Development Board (NRDDB), based in Annai, is center for local self-government, education, and sustainable development. It is the NRDDB who has the funding for the Arapaima Stock Assessment and Aquarium Fish Pilot Project. The NRDDB is grass-roots and very streamlined and needs help with almost all their projects.

The NRDDB runs the first community radio in all of Guyana, Radio Paiwomak. They have requested a communications intern who could help with all areas of the station (technical and broadcasting). A community initiative to start the sustainable use of the area's forests has been headed by Zacherias Norman, the Wildlife and Forestry Commissioner for the NRDDB (also the Tousehau or Captain of Annai Village and a former Iwokrama Ranger). He needs assistance creating a timber-type map of the community forest and implementing a system of increasing the utilization of cut lumber. Later, they would like to establish an annual allowable cut and a fair tenure system. The NRDDB is also trying to capture traditional ecological knowledge from local elders to implement sustainable farming, fishing, and hunting practices in the area. They would benefit from computer-savvy interns to help with mapping, data-bases, and training.

The NRDDB is very community centered and "grass-roots." They have facilities to house and feed interns and have a great enthusiasm to work with internationals. I had the opportunity to help on their *Arapaima* fish count and their Aquarium Fish Harvest Pilot Project. Both experiences were wonderful and very productive. My work seemed to provide a tangible benefit to local people who really needed it.

Contacts:

Vanda Radnik (vradnik@iwokrama.org)

Rodney Davis, NRDDB Chairman
Post C/O Iwokrama International

2.10 Recommendations for Future Interns

Professionally as well as personally, it is always a challenge to find out enough about a place and a project before embarking upon an internship. However, it would have been very beneficial to have had more background information on everything about Guyana, Iwokrama, and Forest Impact Monitoring. Future interns could try to ensure that the College of the Rockies has made a greater commitment to sending them to viable projects and has created stronger ties with Iwokrama Unit Heads (Dr. Watkins for example). It is these people who are an intern's mentor and an integral part of a successful project and internship. This will ensure that upon arrival, interns have a project to start (or continue) work on and have access to all background information, study, and reports that will assist them in their own projects. In addition, it will hopefully gain the cooperation of the mentor in assisting the intern with any emergencies or problems, and in providing flexibility to adjust an internship to current limitations.

From a more personal perspective, Guyana is the most amazing country I have ever visited. It has so much magic, brilliance, triumph, honesty, diversity, contradiction, love,

and warmth, that an internship is not enough time to experience it all. Open your heart and your mind, and don't be scared of anything!! The snakes seem to avoid you, the people love you, accept you, and welcome you with open arms, and the land with forests, mountains, savannahs and rivers embraces and captivates your soul in a way that makes you appreciate every single moment! So often here, I breathed deeply and realized that there wasn't a single thing about the situation that I wanted to change!!

Forget about warm clothes and fancy gadgets that don't like heat and humidity. If you want to bring gifts for locals, remember that most in the Interior still live a largely subsistence life-style. Fish hooks and line, buttons, thread, beads, small tools, scissors, and other useful household and personal grooming accessories are really appreciated. Insects are everywhere so long sleeves and repellent will save you, as well as anti-itch! A big straw hat and lightweight, compact hammock are essential.

3.0 ACKNOWLEDGEMENTS

Thank you to everyone at Iwokrama Field Station for their care, love, interest, and enthusiasm. Thank you to everyone at the Iwokrama head office in Georgetown for doing what they could for us at the Field Station, and for passing and receiving emails. To the Wildlife Unit (Indranee), thanks for the packages and messages to and from. Special thanks to everyone at Maushiparu (the Canopy Walkway) for wonderful days and nights amongst the trees and the birds and countless lessons. Also thanks to the fishermen (*Arapaima* and Aquarium fish) and the cooks on the Rupununi River! Wagri Benai!

Target Species List for Wildlife Monitoring and Patrols

Birds:

Anhinga
Blue and Gold Macaw
Capped Heron
Capuchin Birds
Cock of the Rock
Crested Eagle
Crested Oropendola
Great Black Hawk
Harpy Eagle
Marail Guan
Orange-breasted Falcon
Osprey
Piping Guan
Plumbeous Kite
Powis
Red and Green Macaw
Red-throated Caracara
Rufescent Tiger Heron
Savannah Powis
Scarlet Macaw
Spix's Guan
Swallow-tailed Kite
Grey-winged Trumpeter
White-necked Heron

Reptiles

Anaconda
Boa Constrictor
Bush Master
Emerald Tree Boa
Labarria
Rainbow Boa
Red-footed Turtle
Yellow-footed Turtle

Mammals:

Agouti
Bearded Saki Monkey
Brown Capuchin
Bush Dog
Capybara
Coati
Collared Peccary

Giant Anteater
Giant River Otter
Grey Brocket Deer
Howler Monkey
Jaguar
Jaguarundi
Labba
Margay
Neotropical River Otter
Oncelot
Oncilla
Pigmy Anteater
Puma
Red Brocket Deer
Spider Monkey
Squirrel Monkey
Tamandua
Tapir
Tayra
Three-toed Sloth
Two-toed Sloth
Weeping Capuchin
White-faced Saki
White-lipped Peccary

