

Reserva Ecológica de Guapiaçu



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REGUA NEWSLETTER

Year 5 Issue 1

March 2007



The view this morning from the observation tower. The REGUA villa in the background

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1) Introduction

REGUA is developing extremely well within the field of conservation. Working hard to implement concepts and showing local residents the NGO's commitment through the increasing presence of visitors, which all leads to maintaining an ongoing responsibility to its vision in the protection of the Upper Guapiaçu valley.

The new year has started and Brazil, relieved of the customary January holidays and carnival, is ready to embark on a new year full of activities. With visitors lined up, volunteers seeking placements, the young ranger programme started and Raquel's conversing with the local municipal education officer to proceed with the school visitation, the REGUA team is keen to ensure visitor satisfaction. We received a generous donation from Nancy Weiss to increase the wetlands and IUCN –Netherlands has given some funds to purchase another area in the Estreito to increase the size of the reserve. Local community members are increasingly aware of our message and goals, and the project is looking so very good!!!

The pages of the newsletter have grown over the last couple of years and include as many photos as possible. We hope you like it.

2) Protection at REGUA

REGUA having purchased 800 hectares last year with generous help from its donors, we now administrate close to 6500 hectares of forest. The result of the IUCN/Holland symposium in which REGUA participated last year produced some very positive results. IUCN/Holland has promised us funds to help purchase a very important piece of land at the top of the Estreito region. The neighbouring area is east of REGUA. We are also happy to mention that neighbours, traditional small land owners are already expressing interest in the sale of their plots, happy to let REGUA administrate it rather than



outsiders develop the plots for weekend homes. The purchase of this piece of land secures, a strategic area located within the government-owned Três Picos State Park, and expands the Guapiaçu Reserve by another 35 hectares, preventing development of new sites. Community members are increasingly anxious not to let outsiders buy these prime sites as the development threatens the quality of their water sources. This would be very likely if REGUA did not purchase the site. This new property will protect the land through regular patrolling by REGUA staff to prevent further habitat destruction and poaching, as part of the ongoing management activities. The implementation of these activities within the proposed plot ultimately benefits a way of life and the biodiversity of the region.

The guards are well, though January's weather has been terrible. With a lot of rain, 575mm of rain in a month, the guards were able to do little patrolling. Three rangers took their yearly holidays. The good news is that the Schincariol and the Serra do Mar valleys are hunter free, though our neighbour has witnessed the increase of hunters in his land. Hunters are coming from Teresopolis and camping very high in the valley. Our neighbour and REGUA member, Carlos Lemgruber is very upset about this and we are increasing our patrolling in an effort to reduce their undesirable presence.



The Estreito valley squeezed between REGUA land and Carlos Lemgruber

3) Monitoring and research

i) Projects at REGUA

REGUA is continually working hard with its diverse range of work projects. REGUA is always looking to increase the number and diversity of projects expanding support and base of friends. This all helps to improve the knowledge of the environment of REGUA and contribute to its growing reputation. Projects are also underway to improve the general infrastructure to make the reserve more visitor friendly for education and tourism purposes. Anyone interested in researching at REGUA should contact us for further information.

CURRENT PROJECTS AT REGUA

- REGUA is working with the Brazilian National Environmental Agency (IBAMA) in its approved Red-billed Curassow re-introduction plan (IBAMA 2005), a BART project. São Paulo University student Cristine Steiner is into her second year of her PhD based on this successful project.
- Application has been submitted for funding from Flora and Fauna International (FFI), and DEFRA for the re-introduction of a Black fronted Piping Guan population (Cracidae, *Aburria jacutinga*). We hope the fund will cover employment costs of a local monitor to record important aspects of the birds behaviour.
- Hosting of various Rio de Janeiro and São Paulo and other university research groups.
 - UERJ professor Tim Moulton and his research group continues with the REGUA wetland surveying.
 - Dr Pedro Morais obtained funding to complete a post-doctorate on mathematical modelling wetlands and wishes to research at REGUA and beyond.
 - Permanent forest plots monitoring: Professor Dietmar Sattler of Leipzig University is arriving at REGUA with three students to work in association with the RJ Botanical gardens.
 - RJ Botanical students are maintaining forest plots bordering the primary forest examining species succession within these bordering areas.
- Funding sought from Bromley Trust to cover general costs of REGUA's expanding operations.
- Continual weather monitoring.
- REGUA continues working with NGO "Tereviva" writing a socio-economic diagnosis of all communities in the Três Picos area within the Cachoeiras municipality, a CI project.
- REGUA continues working with NGO "Instituto BioAtlantico" writing the management plan for the Macacu-Guapiaçu river APA, a National "Ministerio do Meio Ambiente" (MMA) project.
- REGUA is entering the second year of the Cachoeiras de Macacu Municipal Agenda 21 municipal sustainability plan (MMA 2006).

- REGUA is also receiving funds towards land purchase within the 300km² Upper Guapiaçu basin from the IUCN –Netherlands committee.
- REGUA is reforesting lowlands with native trees to improve and increase the buffer zone of the Três Picos Park aside the restoration of low-lying wetlands. This is a World Land Trust sponsored project.
- Infrastructure at the REGUA Conservation Center from Schincariol. The construction of the new office is underway.
- Through funding supplied by the San Diego Orchid Society, the OrquidRio society has continued its presence and research at REGUA.

ii) Recent visits

February has seen the visits by the OrquidRio study group in their monthly visit to make an inventory of the orchids here at REGUA. This has been a very encouraging partnership, the result of funding by San Diego Orchid Society. We are now in our fourth month and visit enjoyed by the whole team who are very happy to see so many of the various species growing well in the forest.



Pleurothallis sp. by the waterfall



Dichaea cogniauxiana, common on river edges.

Professor Tim Moulton led a very important expedition to REGUA this month to evaluate and map the health of the river basin measuring quality and life within the streams. All this data will lead to the management plan of the Guapi/Macacu river Basin APA (Area of Environmental Protection) which the IBIO (Instituto Bio Atlantico) NGO is writing. REGUA is participating in this project with Mrs Thabta who is promoting all the community meetings within the municipal boundaries to inform them of the importance of this project, its implications and future.

Two members of the Rio de Janeiro Botanical Gardens also visited in March to establish plots to monitor the quality of forest growing in immediate proximity to former banana plantations. In total seven plots were established on REGUA land. The plots at REGUA will form part of a larger study. The researchers will return to collect data on the tree species in these plots.

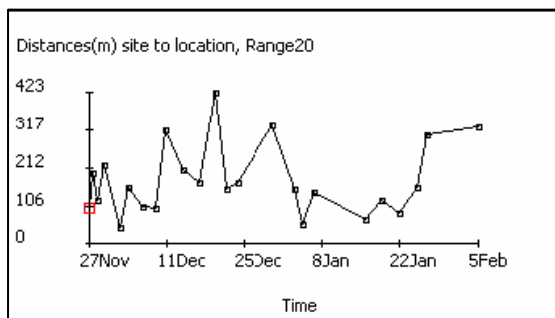
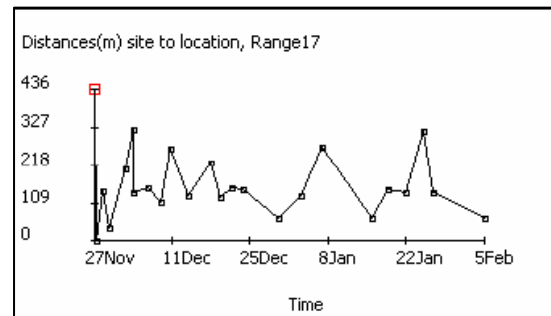
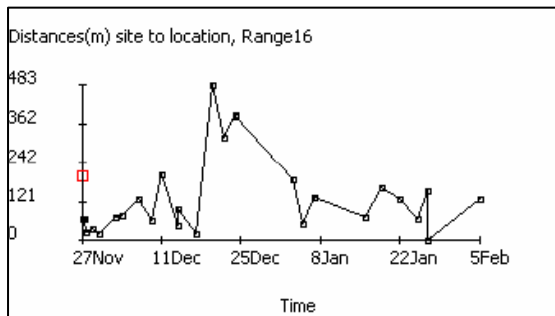
We were thrilled to have an excellent start with the guests this year. Dr Fabio Olmos had time to meet members of the World Land Trust and the Brazilian Atlantic Rainforest Trust and accompany them on a site visit. The birding went very well, with two species new to the reserve sighted on the newly acquired João Paulo land (The Blue-fronted Sapphire sat on a branch for us all to see whilst the White-rumped Hawk circled above). Adelei was similarly pleased to show some visitors the Black-legged Dacnis after being puzzled by the very strange and different female. The call also was quite different from the more common Blue Dacnis. One of our American guests, Sharon Lynn, managed to photograph a different and uncommon Pootoo, which we believe to be the Long-tailed Pootoo. Photos will be included in the next newsletter.

iii) News of the CRAX Reintroduction Project

a) Are the Red-billed Curassows still near the release pen?

It has been six months since the first release of Red-billed Curassows at REGUA. At this period of time, eighteen released birds are alive and only two were predated after release (a female in September 2006 and a male in December 2006). On the 10th of March the last two Curassows, replacements for the two previously predated birds, were successfully released.

One female and two males are visiting the feeders near the release pen periodically, due to available commercial ration. All three birds were released in the end of November 2006. They have not explored spatially the environment as much as the others from the same group, as they have been located at no more than 500m from the release pen.



Distance of newly released birds from the release pen from time of release to time of report.

It seems the other curassows from the same group as the above have not been visiting the feeders near the release pen anymore. An exception is the male number 46, which have been explored the forest a lot and came back to the release pen area once, recently. This male, as well as female number 35 are exploring the forest and its mean distance from the release pen to locations is higher than for curassows that are in the forest since October. The curassows which were released in October have recently began to disperse (in the end of December 2006 and in the beginning of January 2007). None have been located near the release pen since then.

Some birds from the first group (released in August) haven't come back to the area of the release pen since one month after their release. Although there is *ad libitum* commercial ration in the feeders near the release pen, the birds are becoming independent of it. This is a great positive information, once the aim of any reintroduction program is to leave the animals by their own and interfere in the animal's life as little as possible. These graphics will help to decide when to stop providing artificial food for the Red-billed Curassows at REGUA.

b) How are the birds behaving when human beings are around?

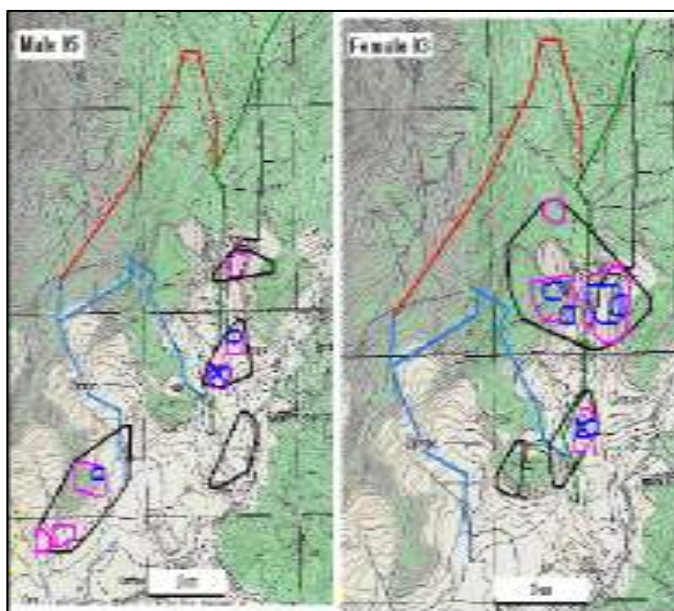
Initially, when the Red-billed Curassows were released, they had no fear of human beings and they did not run away through forest when they saw people. Sometimes, if they were scared, they ran away from human beings, but following on the same open trail, running in front of the people. They were usually seen near the feeders and at the open trails near the release pen. Nowadays, it is rare to find any Red-billed Curassows at REGUA without using radio-tracking equipment. When encountered, the majority of the birds are acquiring two frequent types, and one less-frequent type of behavior (especially the male Red-billed Curassow):

- Firstly it can stay silently at the same place, especially if it's roosting in the middle of the day. An inattentive observer wouldn't see it, due to its silent behavior and inconspicuous feather colors.
- Secondly it can quickly move to other place, running away through the forest and disappearing from our view.
- Less frequently, the birds also fly away (short flaps), to protect itself by roosting in high branches.

c) High use areas by the Red-billed Curassows.

All past reports were illustrated by home range areas assessed by the Convex Polygon method. Although this method is the most common way of representing range size and shape, it is highly sensitive to distant outliers. It often contains large areas which animals never visited, and hence overestimates range size and shape. It also ignores the intensity of use of areas inside the home range. My intention is to explore all analysis of home range along these years of research and, in the future, choose an appropriate estimator (location density or minimum-linkage), based on the results and in the advantages and disadvantages of each one. However, one must keep in mind that no single choice of estimator answers all biological questions.

The Cluster Polygons analysis, another method which uses Minimum-linkage estimators was chosen to illustrate the present report. It has low sensitivity to distant outliers and it is appropriate for examining internal structure of ranges. Indeed, it is used to define core areas, e.g. by excluding outlying locations the edged encloses areas most used by an individual. Ranges 7 software was utilized to produce the maps, by using the Cluster analysis. I chose 3 values for the percentage of locations to be included in a convex polygon (95%, 75% and 50%), in order to define core areas. When all linkage distances were minimal, I chose the nearest-neighbour rule to join locations to clusters. I also chose to plot a single inclusive polygon round all the clusters.



The plotting of the results lead to these interesting maps revealing patterns of movement.

For any more detailed reports please write to me on christinesteiner@yahoo.com

iv) Volunteer Page

Since the start of 2007 there have been nine volunteers visiting REGUA, with six currently in residence. The volunteers have been helping with tree planting, after-planting care, seed collection, office work, patrolling with rangers, assisting visiting researchers and intergrating with the local community. Below one volunteer provides their thoughts on the volunteer programme so far:

My time at REGUA, volunteer Martyn Griffiths - March 2007

Since completing my degree in Environmental Science at Plymouth University last year I realized that I needed to complement my studies with some practical experience.

Working for close to a year in between part time jobs and volunteer experience, with both my local Wildlife Trust (UK) and the World Land Trust, helping supply information for new educational website on tropical forests. I accumulated enough funds to sponsor this travel and work experience. I chose South America, looking for organizations in which to volunteer. I spent time in Argentina learning about their conservation efforts, specifically the use of permaculture/biodynamics within farming methods looking at reduced environmental impacts. My principle areas of interest lie within the field of tropical bio-diversity management and I wanted to enrich my knowledge base. I wrote to REGUA some months ago and am glad to be here now.



My time at REGUA has given me the opportunity to learn a great deal about the operations within an *in situ* conservation based NGO outside the UK. A range of aspects associated with tropical conservation are explored from practical, logistical and administrative activities. The project focuses in habitat protection, education, research, reforestation and sustainability. All areas seem to be working well and I have met other students also participating in this programme. I have discovered that I am more interested in office-based operations, and wish to become a project manager/officer in the future. I have found more direction through activities and conservations with staff and visiting academics, researchers and tourists. The value of higher education has also been re-enforced and I intend on returning to university when back in the UK to further study Conservation and Project Administration. I am concerned about the cost of further education, however my travels have re-enforced my faith in my work, and that this quest for gaining experience has not been a waste of time. I am also looking for other NGOs working within Brazil, and elsewhere, where I can continue to widen my work portfolio within the field of conservation, after my time with REGUA.

I think the REGUA volunteer programme benefits all involved. It allows people with a strong interest in conservation and desire to learn to contribute to the important work of such an NGO. The benefit of additional qualified manpower is a major gain for the NGO, freeing rangers to complete further work. After talking to staff it also seems apparent that the presence of young volunteers gives motivation to rangers in terms of productivity and enthusiasm. I have learnt that the presence of volunteers also have an outreach effect for the wider community, helping to promote the importance of preserving such bio-diverse areas.

I really believe these volunteer programmes are beneficial to help young people like myself, needy of practical experience, to learn the practical issues of conservation management. The volunteers leave better equipped with important skills and renewed enthusiasm to help the conservation status, nationally or internationally. I have learnt much and I trust I have also contributed to this project.

Thanks REGUA for this opportunity, Martyn

Anyone wishing to volunteer at REGUA and contribute to conservation in the neo-tropics should visit the REGUA website (www.regua.co.uk). Raquel and myself would be glad to have you.

4) Restoration

i) Reforestation

REGUA continues its plans of planting trees and since the last newsletter, 8 000 trees have been planted. The summer rains were significant and the plants adapted themselves quickly to their new habitat. Trees are growing very well and most species exceeding their estimated growth rates. February and March has seen an extraordinary dry period with a high pressure build up over the interior of the country. The effect of this drought has been significant and we have been forced to irrigate the trees with our equipment. As our volunteers Phil, Lewis, Sara, Martyn, John and Steve write,

“...as a result extra effort has been made to keep the young, recently planted trees alive. Even with this extra effort, the drought has claimed some trees and survival rate of the newly planted trees will be lower than normal. The lack of rain was initially tackled with watering by hand from the rangers and volunteers. The drought became sufficiently prolonged and severe that it was decided to resort to mechanical irrigation. It is hoped this will sustain most of the trees until the next rains arrive (very soon hopefully!!!)”.



Work has also continued in the nursery, planting newly acquired seeds. Caring for seedlings by weeding, watering and relocating to optimal light conditions.

ii) Wetland Expansion

Work has commenced to extend the wetland. A gift was received from Dr Nancy Weiss to enable us to increase the size of this habitat. The conversion of a grassland area of 2.5ha neighbouring the newly created wetland will offer birds associated with this habitat to be closer to the lodge.



The initial work, necessary to prepare the area to be flooded has been favoured by the recent dry period. A clay barrier will be constructed to retain water on flooding. This will increase the total wetland area from 6ha to 8.5ha increasing the diversity and quantity of wildlife at REGUA, especially birds dependent on this rare habitat.



Thank you very much Nancy for this generous gift, we hope you will have a pleasant surprise on your next visit!

5) Environmental Education

It is with sadness that we report that Eleanora has left the REGUA with her husband Piet to start a new life in the distant shores of Holland. Both contributed enormously to this project and we are sad to see them go. They passed their knowledge to us and helped raise the p'rofile to that of a respected implementation NGO. In the name of the REGUA project and all working here and those living around us we wish to sincerely thank you both.

A report by André Luiz, Environmental Education Officer- REGUA

In 2006, I had the pleasure to start with REGUA's Young Ranger Programme which had already began in 2004 with BART/ REGUA support and last year counted with the backing of The Rufford Foundation. The chief goal of this programme being the raising of environmental awareness of the local youth specially regarding the conservation of the Atlantic Rain Forest.



For this purpose, I was able to organize different activities such as talks and seminars which included topics such as REGUA's Red-billed Curassow re-introduction project, flora, fauna and strategies for conservation in the Atlantic Rain Forest; other activities like working at REGUA's nursery collecting and planting seeds from the forest and a survey of the Guapiaçú river in its most critical sections were encouraged. The Young Rangers were awarded a basic learning kit which consisted on racksacks, text-books, note-books which effectively aided the progress of this project. The US based ornithological association A.B.A donated binoculars towards the project which were also used.

20 youngsters from REGUA's adjacent communities (Guapiaçú, Matumbo, Estreito and Areal) were selected to take part of the project. The criteria used for the selection process being age, school attendance and youngsters whose

parents were known to be hunters in the area. The reception of this project by the communities has been very positive and the feedback from these youngsters to their parents has similarly been very effective.

Young Ranger Programme 2007

The Young Ranger Programme has officially started in February with the selection of 15 youngsters from the neighbouring communities. The continuation of this project is of vital importance to these young members of the communities and their families as they experience a unique chance to acquire the necessary tools which will contribute to the preservation around REGUA.



FEV	16	Avaliação dos candidatos
	23	Reunião com pais
MARÇO	2	Abertura
	9	Montagem de peça sobre reintrodução
	16	História e Geografia de Cachoeiras
	23	Aplicação dos questionários e entrevistas no Matumbo
	31	Apa Guapimirim
ABRIL	6	Feriado
	13	Consumo/ reciclagem
	20	Confecção de cartazes sobre consumo consciente
	28	Parque Estadual dos Três Picos
MAIO	4	Caminhada com reconhecimento da bacia
	11	Montagem de murais fotográficos
	18	Fechamento do projeto (apresentação)
	26	Floresta da Tijuca
JUNHO	1	Plantio de mudas
	8	Caminhada
	15	Revisão 2006/2007
	22	Avaliação semestral
	29	Confraternização geral

Caminhadas na Mata

Trilha do Rio do Gato
Trilha Verde
Trilha Preta

Saídas de Campo

Centro de Primatologia
Parque Estadual dos Três picos
Parque Nacional da Serra dos Órgãos

School Visits

The School Visitation project has proved very successful in the last two years; . In 2006, Regua was visited by over 550 school children and 26 teachers. Regua counted with the support of the local Council through the provision of transport. Though we expected three times as many visitors , it was unfortunate that the municipal authoprityess were not able to send buses with kids to visit us. Raquel has already discussed this with the education authority and we hope to improve the situation as soon as possible.

Thank you for this opportunity to work on this project, André Luis.

6) Tourism at REGUA

Work is continuing to update the website. It is hoped in the next few weeks some features on the plant-life found at REGUA will be posted. Also work is underway on GIS maps which should provide more information on the location of REGUA land and the Upper Guapiaçu valley. Check for updates at www.regua.co.uk.

We have already received a lot of bookings for this year, and our excellent guides, Adelei and Leonardo, are excited to accompany guests on walks and show them the diverse birdlife of REGUA. The list of birds is increasing, with three new sightings in the last few weeks, one photographed by a guest. The addition of the new wetland adds to the mosaic of habitats, and with the extensive *in situ* conservation efforts, we believe the number of birds, and frequency of sightings, will only continue to increase.

Work is underway to expand the villa. Progress has been steady because of the number of other projects currently occurring.

Well, thank you all and we look forward to your visits

Best wishes,
Nicholas and Raquel

Suggested itinerary for a 6 day visit to the Guapi Assu Bird Lodge

Please note that all profits go towards conservation of this threatened biome.



1) **Day 1.** Arrive at the Reserva Ecológica de Guapiaçu (home of the Guapi Assu Bird Lodge). Lunch and afternoon outing around wetland (very close to lodge). Over 120 species recorded.

2) **Day 2.** Day walk on the REGUA green trail, walking up to the waterfall. This is in the lowland Atlantic Rainforest. Over 80 species recorded so far including the Shrike-like Cotinga.

3) **Day 3.** Day trip to Macae de Cima, property of orchid specialist David Miller. High altitude montane forests with over 80 bird species present.

4) **Day 4.** The REGUA 4x4 trail, driving up to mid-elevation forests, another 80 species including the Black-legged Dacnis and White-necked Hawk, White-mantled Hawk and the Eastern Striped Manakin. Afternoon at the wetlands and walking short trails around the lodge.

5) **Day 5.** Day trip with the following options

Option 1 - A drive to the Friburgo Park and Sumidouro trail. Rare Three-tailed Jacamar and the Blue-winged Macaw site. Some 80 possible species present.

Option 2 - A drive to the coast and see the Restinga Antwren, Sooretama Ant Shrike and wading birds on the coastal dunes and flats, some 30 possible species present.

Option 3 - A drive to Nova Friburgo and walk down the mountain escarpment to REGUA land with 120 possible species present.

Option 4 - Very high montane Atlantic Rainforest on Mount Caledonia, 2300m a.s.l. Try and try to see the rare gray winged Cotinga, easier Stream Creepers, Diademed Tanager and Swallow-tailed Cotingas

Option 5 - A walk at REGUA on the newly opened light blue trail in the mid-elevation forest. We are only beginning to count the birds here.

6) **Day 6.** Dependent on travel arrangements, morning walk on REGUA black trail with 50 species recorded so far.

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How can you help

REGUA is a non-profit NGO. REGUA is always looking to expand and consolidate its activities and increase the level of protection offered to the rare and endangered Atlantic Rainforest. The project tries to achieve financial sustainability through ecotourism and project grants from conservation organisations. However there exist shortfalls and if anyone wishes to contribute any donations given are gratefully accepted, and make a real difference.

Here is a list of the kind of expenses we face in order to develop activities to maximise the potential of the nature reserve in its effort to contribute to conservation.

1 acre of currently unprotected Atlantic Rainforest	£50 to £150
<i>Land within the Upper Guapiaçu valley, cost depends on plot size.</i>	
Wardens salary	£2,000 per warden/year
<i>REGUA employs 7 rangers, recruited from local hunters, to patrol the reserve and Schincariol brewery land. As land acquisition increases, more rangers will be required to effectively patrol the area.</i>	
Field equipment for wardens	£320 per warden
<i>Inclusive of Uniform, Boots, Tools and Binoculars (match funded from Kay Optics).</i>	
Construction of a canopy tower at REGUA	£1,100
<i>Base for researchers to work from, and overnight sleeping facility in the field.</i>	
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Setting up a working nursery	£1,070
<i>Including installation of plastic cover, benches, seed trays & grow bags</i>	
Costs of running Nursery for 3 years with irrigation	£500
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Equipment and Books for Schools Groups	£25 per child
<i>Inclusive of guidebooks and field equipment (i.e. pitfall traps, mist nets, buckets, gloves, dipping nets)</i>	
Improvement of facilities for Education Programme	£5,300
<i>Including classroom, bathroom facilities, canteen</i>	
Micro Camera	£100 per camera
<i>10 cameras to be used through REGUA's education programme to view the inside of nest boxes etc.</i>	
Binoculars (8 x 23)	£30 per pair
<i>5 pairs to be available for use by children within Young Rangers programme</i>	
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Sound equipment	£1,070
<i>Needed for recording bird calls, and building a data base library at REGUA</i>	
A3 printer for printing maps & posters	£500
Multimedia projector	£1,070

www.regua.co.uk

www.worldlandtrust.org/projects/brazil.htm

www.americanbirding.org/bex/recipients/index.html