

## **Darwin Initiative Annual Report**

Important note:

To be completed with reference to the Reporting Guidance Notes for Project Leaders – it is expected that this report will be about 10 pages in length – Submission deadline 30 April 2007

### **Darwin Project Information**

Project Ref Number	15-026
Project Title	Bornean Wild cat & Clouded Leopard Project
Country(ies)	Malaysia
UK Contract Holder Institution	Global Canopy Programme
UK Partner Institution(s)	Wildlife Conservation Research Unit, University of Oxford. Royal Society South East Asian Rainforest Research Project;
Host country Partner Institution(s)	Institute for Tropical Biology and Conservation, Universiti Malaysia Sabah.
Darwin Grant Value	£ 229,744
Start/End dates of Project	1 <sup>st</sup> June 2006-1 <sup>st</sup> October 2009
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	1 <sup>st</sup> April 2006 to 31 <sup>st</sup> March 2007. Annual report number 1
Project Leader Name	Katherine Secoy
Project website	<a href="http://www.globalcanopy.org">www.globalcanopy.org</a>
Author(s), date	Katherine Secoy, Maryati Mohamed, Henry Bernard, Joanna Ross and Andrew Hearn

### **1. Project Background**

Bornean tropical forest contains a guild of five felid species: clouded leopard, bay cat, flat-headed cat, marbled cat and leopard cat. One is endangered, three threatened, and their presumed primary habitat is rapidly being lost and/or altered in the region. The behavioural ecology of none is well-known, and the impact of forest destruction and management on each of these species is obscure. This project, based at Danum Valley, a lowland Dipterocarp rainforest within a 9730 km<sup>2</sup> timber concession, and Tabin Reserve (TWR), a predominantly logged lowland Dipterocarp forest surrounded by oil palm plantations, both located in Sabah, Malaysian Borneo (Fig. 1.) will provide base-line data regarding the behaviour and ecology of the five species of Bornean wild cat and their responses to selective logging, upon which informed conservation and management decisions can be based.

Additional aims are to provide conservation research training to host country scientists and students, by means of mammal field-research courses and the intensive training of a postgraduate from the Institute for Tropical Biology and Conservation (ITBC) of the Universiti Malaysia, Sabah. We will increase awareness of the Bornean wild cats in Sabah by producing and disseminating wild cat-specific environmental education materials. Questionnaire surveys will be conducted throughout the communities surrounding the Tabin Wildlife Reserve, to assess the potential level of hunting/trade of the wild cats and their prey and to assess local people's knowledge, beliefs, attitudes and perceptions about conservation. Project findings will be used to provide recommendations for a Bornean wild cat conservation action plan, and presented at a Bornean wild cat conservation workshop at the end of the project.

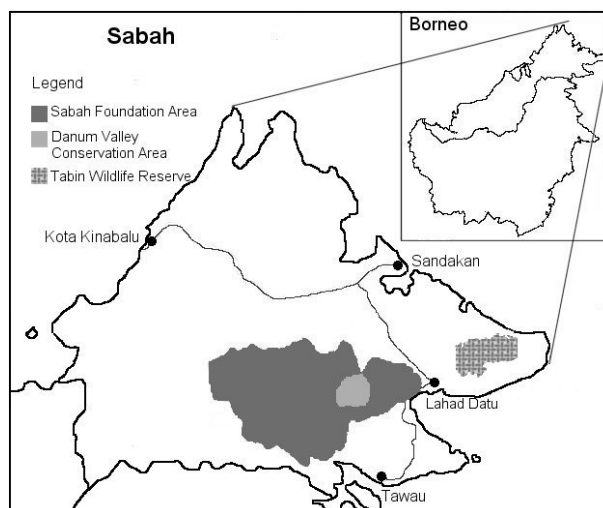


Fig. 1. Map of Sabah, Malaysia, highlighting the two study areas.

## 2. Project Partnerships

The partnership between the Global Canopy Programme (GCP) and the Institute for Tropical Biology and Conservation (ITBC) has strengthened since the project's inception. The ITBC was instrumental in facilitating the smooth-running of the start up phase of the project and continues to provide essential logistical assistance. The ITBC will identify undergraduates and officers from other local institutions in Sabah, for participation in our training courses and has successfully identified a post-graduate research assistant for the project, Daniel Pamin, who will receive three years on-the-job training in mammal field research, thus increasing capacity for future mammal research in Sabah, and thereby enhancing the ability of ITBC to meet Malaysia's commitments to the Convention on Biological Diversity (CBD). We are currently working closely with the ITBC to produce the field course materials.

Additional host country partners include Sabah Wildlife Department (SWD) who have facilitated our preliminary work at Tabin Wildlife Reserve (TWR) and Yayasan Sabah who have provided logistical support at Danum Valley and have agreed to host our environmental education outputs. The UK Royal Society South East Asian Rainforest Research Project has provided excellent technical and logistical support for our activities at Danum Valley and has assigned suitably proficient field assistants. Professor David Macdonald, from Oxford Universities, Wildlife Conservation Research Unit (WildCRU), has provided expert scientific guidance and is continuing to do so.

A new link has been formed with an international NGO, SOS Rhino, with whom we are collaborating on the hunting questionnaire/public awareness survey. SOS Rhino has an existing outreach programme with local communities surrounding TWR, and has facilitated our work here to date. Trainees of the GCP canopy access course at Danum Valley, funded by the Darwin Initiative (DI) (ref: 13-023), have been of invaluable benefit to the current project as we have been able to utilise their climbing skills to conduct a preliminary camera trapping survey in the canopy. An additional link has also been established to the DI funded 'Conservation of the Bornean Elephant' project (ref: 14 014), through Dr. Benoit Goosens, to whom we are providing elephant photographs obtained from our camera traps; Dr Goosens has also provided advice regarding the storage and genetic analysis of felid scat samples. The ITBC has a fully functional molecular genetic lab where DNA analyses could be conducted in the future. We are currently in the process of discussing the possibility of our research assistant from ITBC enrolling on a doctorate programme at University of Wales, Cardiff, to study the conservation genetics of Bornean fields.

Through a United Nations Environment Programme (UNEP) funded project, the GCP has already built a good working relationship with the Malaysian CBD focal point and our partners in Malaysia are actively involved in national CBD processes, and have regular contact with the CBD focal point.

### 3. Project progress

#### 3.1 Progress in carrying out project activities

Due to a three-month postponement in project implementation (unavoidable delays in obtaining research permits) all field activities have been delayed by three months; the Darwin secretariat is aware of, and has approved, this delay.

**Output 1. Recommendation report:** Six months of field research activities have been completed and are proceeding well and as planned; camera trapping at Danum Valley has been conducted in both primary and secondary forest and an initial study has begun in the canopy. Positive results from the camera trapping have enabled suitable sites for live trapping to be identified and initial live-trapping has begun in collaboration with Malaysian researcher Wong Siew Te. Additional live traps are currently on order to enable a larger scale live trapping programme. Tabin Wildlife Reserve (TWR) has been visited and local research permissions have now been granted by the Sabah Wildlife Department. We are currently collating locations of cat sightings from the reserve and in collaboration with a locally based NGO, SOS Rhino, we are selecting suitable sites for camera placement at Tabin. Identification of stakeholders for our dissemination workshop, scheduled for the end of the project, has begun and will continue into the next period.

**Output 2. Mammal field course:** Due to previous commitments of our project partners, ITBC, the field course has been postponed until the second financial year of the project. The date has now been set for June 2007, which falls within the first year of the project; the Darwin Secretariat has approved this delay. Course materials and lectures are nearing completion, and have been prepared in close collaboration with ITBC; the course is currently being advertised in ITBC. One individual, Daniel Pamin from ITBC is currently receiving on-the-job training, part of which will include training to enable him to take a leading role in the field course in future years.

**Output 3. Development / production of wild cat education materials & implementation of environmental education programme** is proceeding as planned. Numerous unique, high quality wild cat photographs (Annex 3a) have been obtained from camera trapping efforts and are now being utilised in our environmental education outputs. Initial 'Wild cats of Borneo' identification education/information posters have been produced (Annex 3b). These will shortly be displayed as part of the environmental education programme at Danum Valley Field Centre, and at the Borneo Rainforest Lodge and Tabin Wildlife Resort tourist facilities. Next period will include creation of 'Bornean wild cat ecology' posters as additional wild cat behaviour/ecology data are obtained, and production of cat postcards, for sale locally.

**Output 4. Hunting survey** in communities surrounding the TWR. The stakeholder analysis for the survey has been successfully completed. Meetings with staff at the Sabah Wildlife Department (SWD) headquarters and a preliminary visit to TWR during March '06 enabled team members to identify stakeholders, and develop logistical approach for secondary surveys. The project members have forged a new collaboration with a Tabin-based NGO, SOS Rhino, who have an ongoing community outreach programme with the Tabin communities in place; this collaboration will increase the likelihood of a successful survey of three villages, North west and North of TWR, and three Plantation settlements that have been identified as key targets for our surveys. Several SWD staff at Tabin and staff from a tourist resort at Tabin have taken part in preliminary questionnaire survey.

#### 3.2 Progress towards Project Outputs

Overall good progress has been made towards the outputs, leading us to believe that the outputs will be met before the close of the project. Our camera trapping efforts have proved encouraging. The initial data, which will feed into the final report, is continuing to advance our understanding of the ecology of Borneo's wild cats. Initial results already offer preliminary insight into relative densities of wild cats and the impacts of selective logging. The camera trapping has resulted in numerous, unique, high quality photos of clouded leopards, leopard cats and marbled cats, in addition to host of rarely seen mammals and birds. These exclusive photos of animals in their natural habitat have also enabled the production of educational posters. Preparation for the first training course is going well and

will have significant input from our collaborators. The field course has been met with great interest from staff at the ITBC, and it has been agreed that the course will now form part of the B.Sc. Conservation Biology syllabus at the ITBC. Interest in the course has also been shown from parties outside of ITBC and therefore it is highly likely that the stated number of Malaysians trained (60) will be met, and possibly exceeded, by the end of the project. Our research assistant from ITBC, Daniel Pamin is currently receiving on-the-job training and is progressing extremely well. The hunting/public awareness survey is progressing steadily and the first report will be ready by the end of the first project year. All initial output level assumptions still hold true; there are no new assumptions to be taken into account.

### 3.3 Standard Output Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
<b>Established codes</b>						
5	1 UMS/ITBC Malaysian postgraduate will be selected as our project counterpart, employed as a field assistant for the duration of the project and will receive extensive training in mammal field research techniques.	1				
7	Educational leaflets & posters describing Bornean wild cats (2 posters prepared, one which will be displayed at 3 locations).	4				
8	2 principal researchers: 39, 48, 48, and 8 weeks during financial years 06/07, 07/08, 08/09, and 09/10 respectively..	30 weeks				
8	Project manager: 1 week 06/07 and 09/10.	1 week				
8	Scientific advisor: 1 week in 06/07, 07/08 and 08/09	1 week				
14A	Minimum of three seminars at Danum presenting project findings.	2				
14B	Presenting findings at relevant conferences	2				
15B	Publicity articles in University and Sabah institution magazines.	1				
16A	Annual "Canopy Fellows Newsletter" and bulletins on GCP website.	5				
16C	What's up newsletter circulation GCP Annual Report Canopy Fellows Newsletter GCP website  IUCN Cat Specialist Group 'Project of the Month';	1000 1000 1000 c.40,000/ month				
23	Financial outputs	£2,500				

**Table 2 Publications** (copies sent in Hard Copy and can be found in Annex 3C)

Type *	Detail	Publishers	Available from	Cost £
(eg journals, manual, CDs)	(title, author, year)	(name, city)	(eg contact address, website)	(if applicable)
Website: GCP	<i>Bornean Wild cat and Clouded Leopard Project: Conserving Borneo's Wild cat's.</i> Andrew Hearn and Joanna Ross. (2006)	Global Canopy Programme, Oxford	<a href="http://www.globalcanopy.org/news/borneo-wild-cat-factsheet.pdf">http://www.globalcanopy.org/news/borneo-wild-cat-factsheet.pdf</a>	
Online Project overview	<i>IUCN/SSC Cat Specialist Group 'Project Of The Month'. Bornean Wild cat &amp; Clouded leopard Project.</i> Andrew Hearn and Joanna Ross. (2007).	IUCN/SSC Cat Specialist Group, Bern.	<a href="http://www.catsg.org">www.catsg.org</a>	NA
Journal: What's Up?	<i>Bornean Wild cat and Clouded Leopard Project.</i> Andrew Hearn and Joanna Ross. (2007).	International Canopy Network, USA	International Canopy Network, 2103 Harrison Ave NW, PMB 612, Olympia, WA 98502, USA. <a href="http://www.evergreen.edu/ICAN/ican/">http://www.evergreen.edu/ICAN/ican/</a>	NA
Newsletter: Branching Out	<i>Bornean Wild cat and Clouded Leopard Project.</i> Andrew Hearn and Joanna Ross. (2007).	Global Canopy Programme, Oxford	Global Canopy Programme, John Krebs Field Station, Wytham, Oxford. OX2 8QJ. UK. <a href="http://www.globalcanopy.org">www.globalcanopy.org</a>	NA
Newsletter: Darwin News	<i>3-Year Study Underway to Help Conserve Borneo's Canopy Cats.</i> Andrew Hearn and Joanna Ross. (2007).	DEFRA, London	Darwin Initiative website: <a href="http://www.darwin.org">www.darwin.org</a>	NA
Annual Report: GCP Annual Report	<i>Bornean Wild Cat and Clouded Leopard Project.</i> Katherine Secoy (2006)	Global Canopy Programme, Oxford	Global Canopy Programme, John Krebs Field Station, Wytham, Oxford. OX2 8QJ. UK. <a href="http://www.globalcanopy.org">www.globalcanopy.org</a>	NA

### 3.4 Progress towards the project purpose and outcomes

Our initial camera trapping study, despite its early stage, already offers preliminary insight into Bornean wild cat ecology. The results are encouraging, and we are confident that future field work will enable us to better understand Bornean wild cat habitat requirements and the impact of selective logging, allowing us to more effectively guide forest management activities for cat conservation. The high level of interest from ITBC and other Sabah based NGOs in field course is encouraging; ITBC have now decided to permanently adopt course into their B.Sc. Conservation Biology syllabus, ultimately leading to increased capacity for mammal field research in Sabah. Intensive training of our research assistant, Daniel Pamin from ITBC and also research assistants from Danum Valley is helping to raise awareness of these felids at a local level. The information posters displayed at the tourist resorts are promoting the cats and their conservation needs to an international and local audience.

### 3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits

Already we are gaining a better understanding of the ecology of the Bornean Wild cats, which will feed into recommendations for Forest Managers in the area, and thereby aid Malaysia fulfil its commitments under the Convention on Biological Diversity. Specifically meeting the following obligations under the convention:

- 1) Determining the status and conservation needs of endemic or threatened species and the impact of current forest management practises on these species
- 2) Develop and implement conservation strategies for endemic and threatened species for global or regional application.

By working closely with Daniel Pamin, we have already increased the in country capacity of Malaysian field researchers and the plans to introduce the field course onto the curriculum at the University Malaysia Sabah, will greatly enhance Malaysia's capacity for mammal research in the future. By raising awareness, through the public education programme we plan to get local buy in, which will help managers work effectively to arrive at mutually beneficial conservation practises, that will enable local communities to live alongside the Bornean wild cats, harmoniously.

## 4. Monitoring, evaluation and lessons

**Project Management and Monitoring:** As well as the site visits from the UK Project Manager, the host country project manager and the scientific advisor, regular meetings are held with ITBC to discuss project progress in conjunction with careful planning and reviewing of scheduled activities ensures that outputs are met in a timely manner. Regular reports are submitted to the Global Canopy Programme by the project investigators and there is weekly contact on project progress.

**Indicators of achievement:** Progress in the project fieldwork has been monitored through the accumulation of images of the wild cats and their prey, which will provide the vital data to feed into the recommendation report. A schedule of activities with achievable milestones has also been produced for the PI's and the project manager and PI's measure the project's progress against these.

**Budget:** Project expenditure is reviewed bimonthly and compared to the budget on a regular basis to make sure the project is keeping to budget.

This year we have learned that it can take some considerable time working overseas and that perhaps we had been a little too optimistic in some of the original timelines. However, now that most of the major hurdles have been overcome we are now confident that the project will complete its outputs by the end of the project.

## 5. Actions taken in response to previous reviews (if applicable)

N/A

## 6. Other comments on progress not covered elsewhere

The Global Canopy Programme is continuing in its efforts to raise further funds for the project, especially in getting more camera traps. The more traps available to the project the better. To date a further £2,500 was raised from the International Trust for Nature Conservation. These funds have been used to purchase further equipment for the project. Other proposals have been submitted and we are awaiting responses.

## 7. Sustainability

During project initiation, the GCP research associates actively promoted the project among relevant stakeholders in both Malaysia, including the British Embassy, WWF Malaysia, Yayasan Sabah, Sabah Wildlife Department, and Malaysian Conservation Alliance for Tigers, and internationally, including IUCN Cat Specialist Group, Small Cat Conservation Alliance. The GCP has ensured that these organisations are kept informed of project progress through regular email updates. The project will be promoted via wild cat information posters which will shortly be displayed at Borneo Rainforest Lodge, Tabin Wildlife Resort and Danum Valley Field Centre.

Upon project completion responsibility for ongoing work will be handed over to ITBC and equipment will be donated to ITBC to facilitate future mammal research; our postgraduate research assistant from ITBC will have the technical and academic capability to lead future research in this field. ITBC have now decided to permanently adopt this course onto their B.Sc. Conservation Biology Programme. GCP will retain contact with ITBC to provide guidance when necessary. Interest shown by Danum Valley staff, of all capacities, in the project in general and in the camera trapping photographs suggest increasing interest in the general biodiversity of Sabah. Upon project completion responsibility for on-going work will be handed over to the ITBC. One ITBC counterpart will have worked alongside the principal researchers for three years and benefited from a WildCRU scholarship (see Q18), and will thus have the capacity to lead future work in this area. If acceptable to the host country partners, and subject to funding, the principal investigators will remain in Sabah to work alongside local partners to ensure legacy is achieved. In May 2009 relevant stakeholders will be invited to attend a project dissemination workshop during which the project's recommendations for the conservation of Borneo's felids will be discussed. By working closely with the Sabah Wildlife department, we hope that the recommendations provided by the project will be adopted.

## **8. Dissemination**

Given that the project has only been running for 6 months in the host country, and the consequent limited research findings, to date our dissemination activities have been limited to our wild cat information posters, discussed above, and a number of talks given to Visiting UK University group and visiting international academics, at Danum Valley, including a 'camera trapping' seminar, in collaboration with WWF Malaysia, presented to staff and students from Plymouth University. During this time we have also been able to display the project's work in poster presentations which included one for the UK's Biodiversity, Landscapes and Rural Affairs Minister, Barry Gardiner and several Malaysian workshops.

The target audience for our later outputs, principally our final report, which will provide recommendations for a wild cat action plan, will include: Yayasan Sabah, the principal foundation body responsible for the management of Sabah's State forest land; Sabah Wildlife Department, who are the governmental body responsible for the management and conservation of the State of Sabah's wildlife resources and WWF Malaysia.

**10. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

To date, the project has resulted in several thousand images of wildlife from Danum Valley. Among these, are the fourth and fifth photos in the world of the extremely rare bay cat in the wild, these photos are the first confirmed record of this species for Danum Valley and indeed the whole of Sabah. Also recorded has been the rare otter civet, this photograph is believed to be one of only a few of this species in the wild and the first confirmed record of the otter civet for Danum Valley.

[I agree for ECTF and the Darwin Secretariat to publish the content of this section](#)



## Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 - March 2007	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <p>The conservation of biological diversity,</p> <p>The sustainable use of its components, and</p> <p>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</p>	<p>New, constructive data regarding Bornean wild cat ecology, response to habitat alteration, &amp; threats from hunting in Sabah.</p> <p>Students trained in mammal field techniques</p> <p>Bornean wild cat education materials produced &amp; utilised in environmental education programmes.</p>	<p>The project is already providing an insight, through camera trap images of the cats and their prey species, into the ecology and behaviour of Borneo's endemic and endangered wild cats, which will not only aid Sabah Wildlife Department (SWD) in conservation efforts, but as the cats are flagship species will also aid in the conservation of other biodiversity in the region. The education programme, which is underway, will raise awareness and enable SWD to effectively work with local communities to solve on the ground conflicts between the communities and wildlife, particularly the cats.</p>	<ul style="list-style-type: none"> <li>• Camera trapping will continue, live-trapping programme to be expanded. Questionnaire surveys at TWR.</li> <li>• Training courses to be held at Danum Valley, participant feedback to be used to indicate necessary changes for next course</li> <li>• Production of additional wild cat specific</li> </ul>
<p><b>Purpose</b></p> <p>Threatened Bornean wild cat species better protected through an increased knowledge base, greater awareness, &amp; through enhanced capacity for field research in Sabah.</p>			

	our camera trapping activities	education materials' talks/seminars presented.	additional stakeholder questionnaires in hunting survey.
<p><b>Output 1.</b> A report providing recommendations for a Bornean Wild cat Action Plan for Sabah and a project dissemination workshop</p>	<ul style="list-style-type: none"> <li>Report peer reviewed &amp; publication date established. Report distributed to target institutions/bodies within 6 months of project completion.</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of stakeholder questionnaires in hunting survey.</li> </ul>	<ul style="list-style-type: none"> <li>Initial data, which will feed into the final report, has been obtained and data collection is continuing to advance our understanding of the ecology of Borneo's wild cats. Initial results encouraging, with 64 wild cat photo-captures (27 clouded leopard, 31 leopard cat, 4 marbled cat and 2 bay cat), and data already offer preliminary insight into relative densities of each felid species and the impacts of selective logging. Project staff are forming good contacts with relevant stakeholders in Sabah/Malaysia. Indicator still appropriate.</li> </ul>
<p>Activity 1.1. Field research programme</p>		<ul style="list-style-type: none"> <li>6 months of camera trapping successfully underway at Danum Valley, in primary and secondary forest, and pilot canopy camera trapping survey initiated. Initial live trapping programme started. Next period will include expanding the project to TWR and the expansion of our live trapping efforts</li> </ul>	
<p>Activity 1.2. Wild cat Action Plan recommendation report</p>		<ul style="list-style-type: none"> <li>Next period will include initial data analysis of camera trapping, leading to preliminary conclusions regarding wild cat management</li> </ul>	
<p>Activity 1.3. Project dissemination workshop</p>		<ul style="list-style-type: none"> <li>Identification of stakeholders has begun and will continue into the next period. Workshop is set to be held at end of project.</li> </ul>	
<p>Output 2. Training in Mammal field research techniques, resulting in increased human capacity in Malaysia for mammal field studies.</p>	<ul style="list-style-type: none"> <li>Minimum of 60 Malaysian students &amp; scientists, including 2 trainers, successfully trained during field course. 1 individual to receive 3 years on the job training and 2 month WildCRU scholarship.</li> </ul>	<ul style="list-style-type: none"> <li>Training course preparations proceeding well. ITBC have now decided to permanently adopt course onto their BSc Conservation Biology syllabus. We have received significant interest regarding attending course, both from ITBC undergraduates and from other Conservation organisations in Sabah and Peninsular Malaysia. Indicators still viewed as appropriate.</li> </ul>	
<p>Activity 2.1. Field courses in mammal field research techniques.</p>		<ul style="list-style-type: none"> <li>Training course materials and lectures are being prepared in close collaboration with ITBC; course materials including field course manual are nearing completion. Course date</li> </ul>	

	<p>set, will take place during next reporting period. Course is currently being advertised in ITBC. One individual from ITBC currently receiving on-the-job training, part of which will include training to enable him to take a leading role in the field course in future years.</p>
<p>Output 3. Wild cat specific education programme, aimed at schools, communities &amp; tourists, for use in DVFC environmental education centre, &amp; 2 major tourist facilities in the region: Borneo Rainforest Lodge &amp; Tabin Wildlife Resort.</p>	<ul style="list-style-type: none"> <li>Bornean wild cat education materials produced using clouded leopard as a flagship species &amp; displayed at target institutions, &amp; utilised in environmental education programmes.</li> </ul>
<p>Activity 3.1. Development / production of wild cat education materials &amp; implementation of environmental education programme.</p>	<ul style="list-style-type: none"> <li>Initial education/information posters produced for display. Indicator will clearly demonstrate whether output has been met.</li> <li>Numerous unique, high quality wild cat photographs have been obtained from camera trapping efforts which are being utilised in our environmental education outputs. Initial 'Wild cats of Borneo' identification education/information posters produced for display. These will shortly be displayed as part of the environmental education programme at Danum Valley Field Centre, and the tourist facilities: BRL &amp; Tabin Wildlife Resort. Next period will include creation of 'Bornean wild cat ecology' posters as additional wild cat behaviour/ecology data are obtained, and production of cat postcards, for sale locally.</li> </ul>
<p>Output 4. Report on the threats from hunting &amp; trade on wild cat populations in &amp; surrounding Tabin Wildlife Reserve</p>	<ul style="list-style-type: none"> <li>Number of participants in communities surrounding Tabin Wildlife Reserve successfully interviewed.</li> </ul>
<p>Activity 4.1. Hunting survey in communities surrounding the TWR.</p>	<ul style="list-style-type: none"> <li>Initial survey and stakeholder analysis successful; new collaboration with local based NGO will increase chances of successful survey. Preparations being made for main follow-up surveys. Indicator will still being viewed as appropriate.</li> <li>Stakeholder analysis for survey successfully completed. Meetings with staff at the Sabah Wildlife Department headquarters and a preliminary visit to TWR during March '06 enabled team members to identify stakeholders, and develop logistical approach for secondary surveys. Three villages, North west and North of TWR, and three Plantation settlements have been identified as key targets for our surveys. Several SWD staff at Tabin and staff from tourist resort at Tabin have undergone preliminary questionnaire survey. New collaboration with Tabin-based NGO, SOS Rhino, will increase likelihood of successful survey. Next period will include several visits to follow-up survey</li> </ul>

## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve <ul style="list-style-type: none"> <li>the conservation of biological diversity,</li> <li>the sustainable use of its components, and</li> <li>the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</li> </ul>			
<b>Purpose</b>			
<ul style="list-style-type: none"> <li>Threatened Bornean wild cat species better protected through an increased knowledge base, greater awareness, &amp; through enhanced capacity for field research in Sabah.</li> </ul>	<ul style="list-style-type: none"> <li>New, constructive data regarding Bornean wild cat ecology, response to habitat alteration, &amp; threats from hunting in Sabah.</li> <li>Students trained in mammal field techniques</li> <li>Bornean wild cat education materials produced &amp; utilised in environmental education programmes.</li> </ul>	<ul style="list-style-type: none"> <li>Partner institution reports. Final &amp; annual project reports and feedback from dissemination workshop.</li> </ul>	<ul style="list-style-type: none"> <li>Sufficient numbers of wild cats can be filmed/ photographed, trapped, collared &amp; successfully tracked</li> <li>Recommendations read by relevant stakeholders &amp; changes implemented where necessary.</li> </ul>
<b>Outputs</b>			
<ul style="list-style-type: none"> <li>A report providing recommendations for a Bornean Wild cat Action Plan for Sabah and a project dissemination workshop</li> </ul>	<ul style="list-style-type: none"> <li>Report peer reviewed &amp; publication date established. Report distributed to target institutions/bodies within 6 months of project completion.</li> </ul>	<ul style="list-style-type: none"> <li>Reviews &amp; feedback on recommendation report from peers and from workshop attendees. Min. 2 peer reviewed papers published in scientific journals within 1 year of project end.</li> <li>Field course manual, participants attendance records &amp; feedback assessment</li> </ul>	<ul style="list-style-type: none"> <li>Research project is completed and data analysed.</li> <li>Stakeholders attend project dissemination workshop.</li> <li>Sufficient numbers of students show an interest in attending the course, &amp; continue in the field of ecology</li> </ul>
<ul style="list-style-type: none"> <li>Training in mammal field research techniques, resulting in increased human capacity in Malaysia for mammal field studies.</li> </ul>	<ul style="list-style-type: none"> <li>Minimum of 60 Malaysian students &amp; scientists, including 2 trainers, successfully trained during field course. 1 individual to receive 3 years on the job training and 2</li> </ul>		

<ul style="list-style-type: none"> <li>Wild cat specific education programme, aimed at schools, communities &amp; tourists, for use in DVFC environmental education centre, &amp; 2 major tourist facilities in the region: Borneo Rainforest Lodge &amp; Tabin Wildlife Resort.</li> <li>Report on the threats from hunting &amp; trade on wild cat populations in &amp; surrounding Tabin Wildlife Reserve.</li> </ul>	<p>month WildCRU scholarship.</p> <ul style="list-style-type: none"> <li>Bornean wild cat education materials produced using clouded leopard as a flagship species &amp; displayed at target institutions, &amp; utilised in environmental education programmes.</li> <li>Number of participants in communities surrounding Tabin Wildlife Reserve successfully interviewed.</li> </ul>	<ul style="list-style-type: none"> <li>Posters, handouts, guides, &amp; new wild cat photos &amp; video. Partner institution reports.</li> <li>Hunting reports produced at end of year 1 &amp; 2.</li> </ul>	<ul style="list-style-type: none"> <li>School groups continue to visit DVFC &amp; utilise the educational materials. Tourists continue to visit Borneo Rainforest Lodge &amp; Tabin Wildlife Resort.</li> <li>Communities co-operate with us &amp; our local collaborators during the questionnaire survey.</li> </ul>
<p><b>Activities</b></p>	<p><b>Activity milestones (summary of project implementation timetable)</b></p>		
<ul style="list-style-type: none"> <li>Field research Programme</li> </ul>	<ul style="list-style-type: none"> <li>Yr 1: camera survey of DV &amp; TWR, phase 1 of live-trapping programme at DV, first cats collared. Yr 2. Continuation of camera survey and trapping &amp; tracking programme. Yr 3. Continuation of camera survey &amp; trapping &amp; tracking programme. Long-term mammal monitoring programme established.</li> </ul>		
<ul style="list-style-type: none"> <li>Wild cat Action Plan recommendation report</li> </ul>	<ul style="list-style-type: none"> <li>Collation of information from field programme; report produced and presented at workshop in May 2009, final amended report produced by June '09; submission of &gt;2 papers to peer reviewed journals by Mar '10.</li> </ul>		
<ul style="list-style-type: none"> <li>Project dissemination workshop</li> </ul>	<ul style="list-style-type: none"> <li>Relevant stakeholders and project partners invited to attend workshop in Kota Kinabalu, Sabah during May 2009</li> </ul>		
<ul style="list-style-type: none"> <li>Field courses in mammal field research techniques.</li> </ul>	<ul style="list-style-type: none"> <li>Two 5 day field courses to be held each year during 2006/07/08, each involving a minimum of 10 Malaysian students per year, at least 1 Malaysian ecologist &amp; 2 UK ecologists.</li> </ul>		
<ul style="list-style-type: none"> <li>Development / production of wild cat education materials &amp; implementation of environmental education programme.</li> </ul>	<ul style="list-style-type: none"> <li>Initial ID/information posters, handouts &amp; guides produced &amp; displayed/presented by Yr 1. Additional environmental education materials produced in Yrs 2 &amp; 3 as further wild cat data &amp; photos are obtained.</li> </ul>		
<ul style="list-style-type: none"> <li>Hunting survey in communities surrounding the TWR.</li> </ul>	<ul style="list-style-type: none"> <li>Yr 1: 4 week survey completed, &amp; data analysed. Yr 2: Follow-up survey completed, data analysed &amp; final report produced and distributed.</li> </ul>		
<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>Sufficient numbers of wild cats can be filmed/ photographed, trapped, collared &amp; successfully tracked.</li> <li>N/A</li> <li>Key stakeholders attend workshop.</li> <li>Sufficient numbers of students/scientists attend the course.</li> <li>Sufficient data &amp; wild cat photos are obtained for incorporation in environmental education materials</li> <li>Communities co-operate with us &amp; our local collaborators.</li> </ul>			

## Annex 3 onwards – supplementary material (optional)

Annex 3A Selection of Cat Images and their prey



*Marbled Cat*



*Argus Pheasant*



*Malay Civet*



*Clouded Leopard*



*Mouse Deer*



*Bay Cat*



*Leopard Cat*



*Pig tail Macaque*

# The Wild Cats of Borneo

The tropical rainforests of Borneo are home to five species of wild cat: flat-headed cat, marbled cat, leopard cat, the endemic bay cat and the enigmatic clouded leopard.

These species are currently threatened due to habitat degradation and fragmentation, as a result of widespread timber harvesting and conversion for agriculture. Despite their threatened status the behaviour and ecology of the Bornean wild cats remains poorly understood.

**Clouded leopard** *Neofelis nebulosa*



Named for the beautiful cloud-like coat pattern, recent research suggests this is a new species, separate from those on the mainland. Measuring up to 150 cm from nose to tip of tail and weighing up to 18 kg, this is the largest felid on Borneo. Thought to hunt both in the trees and on the ground, this cat takes larger mammal prey such as monkeys and muntjacs.

**Bay cat** *Catopuma badia*



Perhaps the least known of all the world's cats, this elusive felid is rarely seen and seldom photographed. It is found only on Borneo. Measuring about 100 cm from nose to tip of tail and weighing an estimated 3-4 kg this cat is typically reddish in colour. This photo is only the 5<sup>th</sup> ever of this species in the wild.

**Marbled cat** *Pardofelis marmorata*



Like a smaller version of the clouded leopard, this felid has a beautiful marbled coat. It can be distinguished from the clouded leopard by its proportionately longer, and bushier, tail and its smaller size (around 3kg). Little is known about this felid, but it is thought to be arboreal and rare.

**Leopard cat** *Prionailurus bengalensis*



Borneo's most common wild cat. Similar in size to a domestic cat, weighing 2-3 kg, this felid is associated with disturbed forest areas and can often be seen by the road sides at night. This cat hunts small mammals such as rats, and can even survive in oil palm plantations.



**Flat-headed cat** *Prionailurus planiceps*

This small cat, weighing around 2 kg is an aquatic specialist and is found along small streams, rivers and wetland areas. Flat-headed cats have sharper pre-molars than any other cat, semi-retractable claws and large forward-pointing eyes, all adaptations to aid it to catch its principal prey of fish and frogs.



Conservation of Borneo's cats.....The 'Bornean Wild Cat & Clouded Project' is a new initiative by the Global Canopy Programme and the University Malaysia Sabah, which is investigating the ecology of these little known cats. The photographs in this poster were taken in the Danum Valley by remote camera traps, as part of this project. For more information email a team@globalcanopy.org or j.roos@globalcanopy.org, or visit [www.globalcanopy.org](http://www.globalcanopy.org). Funding for this project is being provided by the Darwin Initiative, U.K. Department for Environment Food and Rural Affairs.



Text and design: J. Roos and A. J. Heath

*Annex 3C Published articles*

1. IUCN Cat Specialist Group "Project of the Month"
2. Global Canopy Programme Annual Report
3. Darwin News Issue 8
4. GCP Branching Out News letter

***Hardcopy of articles to be sent in the post.***



## Checklist for submission

	Check
<b>Is the report less than 5MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> putting the project number in the Subject line.	Yes
<b>Is your report more than 5MB?</b> If so, please advise <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> that the report will be send by post on CD, putting the project number in the Subject line.	
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	Yes
Have you completed the Project Expenditure table?	Yes
Do not include claim forms or communications for Defra with this report.	