

WILDLIFE RESEARCH APPLICATION FORM

Application No.: _____

A. General Information

1. Name of Applicant(s).

Ronald S Stewart

2. Mailing Address of Applicant(s).

93 Port Royal Street, Kingston, Jamaica

3. Telephone Number: 876 397 7488

Facsimile Number: _____

E-mail Address: admin@jamaicancaves.org

URL: www.jamaicancaves.org

4. Title of Project.

Examination of deep guano deposits in Jamaican caves

5. Name & Institutional Address of Principal Investigator.

Ronald S Stewart

Jamaican Caves Organisation,

93 Port Royal St, Kingston, Jamaica

6. Qualification of Principal Investigator.

Chair - Jamaican Caves Organisation

7. Names and Qualifications of Associates who will work on the project.

Chris Grooms

Research Technician

Paleoecological Environmental Assessment and Research Lab (PEARL)

Queen's University, 4305 Biosciences Complex, 116 Barrie Street, Kingston, ON

Professor John P Smol, FRSC, Canada Research Chair in Environmental

Change, Paleoecological Environmental Assessment & Research Lab (PEARL) Dept

Wieslaw Bogdanowicz

Editor-in-Chief of Acta Chiropterologica

Professor and Head, Museum & Institute of Zoology PAS

Wilcza 64, 00-679 Warszawa, Poland

8. Names and Addresses of Funding Agencies Supporting the Project.

Queen's University, 4305 Biosciences Complex,

116 Barrie Street, Kingston, ON

Museum & Institute of Zoology PAS

Wilcza 64, 00-679 Warszawa, Poland

B. Research Project Information

1. Short description of the project including its objectives (Attach copy or use separate sheet if necessary).

Deep bat guano deposits will be used to obtain paleoecological data for two sites in Jamaica by way of isotope ratios. DNA barcoding will be used to determine insect species consumed by insectivorous bats during the period of deposition of guano (estimated to be at least several centuries). Radiocarbon dating will establish the chronology of the deposits.

2. Location of the project and sites at which research will be undertaken (Attach map if necessary).

Sampling will take place at Schwallenburgh Cave, near Moneague, St Ann, and at Home Away Cave, near Windsor, Trelawny.

3. Expected output at end of the project.

A time-line of climatic conditions during the period of deposition will be established. Changes in insect species consumed by the bats will be determined. Changes in bat species and invertebrate species make-up in the caves may be determined.

—

4. Project significance/benefits.

The project will advance the knowledge of techniques to examine deep guano deposits in tropical caves for paleoecological data

4a. What are the benefits to be derived from the research to Jamaica?

Historical accounts of climatic and environmental conditions in the two research areas will be augmented with hard data, and prehistorical records will be created.

4b. What type of contribution you will be able to provide during your visit to Jamaica?

1 Technological/Knowledge transfer

All data, and technical methods used in the project will be shared with NEPA.

2 Presentation of Lecture

The Principal Investigator would be pleased to present a lecture on the project after completion of the analysis and creation of papers and reports.

3 State other contributions

The Principal Investigator, Ronald S Stewart, is a Jamaican resident. His contributions as the Chair of the Jamaican Caves Organisation have included pro bono assistance to the biodiversity division of NEPA, as well as assistance to TPDCo, WRA, JNHT, JTB, UDC, parish councils, the JCF and the archaeological department of UWI. These contributions are ongoing and will continue into the foreseeable future.

5. Why was Jamaica selected as the research site?

The Principal Investigator is a Jamaican resident, and his field of expertise is the study of the caves of the island..

C. Specimen Collection

Researchers desiring to collect specimens should provide the following information and await permission:-

1. Scientific and common names of organisms to be collected (If any of these are endemic to Jamaica or non-classified, i.e. a new species, this must be stated).

No species will be collected. Sampling of the guano deposits will be limited to the section below the active biological zone used by micro and macroinvertebrates.

2. Locality at which collections will be made (If the site is within a Protected Area give justification).

Two sites will be sampled, near Moneague and Windsor. The sites were selected because they are two of the very few sites that still have deep deposits of guano.

3. Indicate the total number of specimens per species which is required for collection (If animals are to be collected, state sex).

Species to be Sampled	Number of Specimens (male or female)	Number of live specimens	Number of dead specimens
N/A			

4. Please indicate the period within which the research will be conducted in Jamaica (day/month/year).

The project was due to begin on March 4, 2012. This is still our preferred schedule.

5. Please indicate the following:-

- a. Purpose for which specimens are to be collected.

Sampling will be of guano only. No living specimens will be collected.

- b. Method of collection to be employed.

10cm cores will be taken from the deposits, and then sectioned. Disturbance to the surrounding deposits will be minimal.

- c. Expertise in collecting the specimens.

Two of the associate investigators, Chris Grooms, and Wieslaw Bogdanowicz, have extensive experience in collecting sedimentary deposits for analysis.

d. Method of storage/transportation of specimens.

The deposits will be stored in individual bags once the cores are sectioned.

Transportation off-island will probably be by courier.

6. a. Will the specimens be exported?**X**.....yesno If **yes**,
complete section

6 (b); if **no** complete section 6 (c)

b. The specimens will be:

i. Deposited at (name and address of institution):

Paleoecological Environmental Assessment and Research Lab (PEARL)

Queen's University, 4305 Biosciences Complex, 116 Barrie Street, Kingston, ON

Museum & Institute of Zoology PAS

Wilcza 64, 00-679 Warszawa, Poland

The Jamaican Caves Organisation, Kingston, Jamaica or Institute of Jamaica (at their preference).

ii. Used for laboratory experiments (name and address of institution):

Analysed for paleoecological data at Queens University and the Museum & Institute of Zoology, Poland.

iii. Used for other purpose:-

c. The specimens will be:

i. Deposited at (name and address of institution):

ii. Used for laboratory experiments (name and address of institution):

iii. Re-introduced (name site for re-introduction):


iv. Used for other purpose:-

Duplicates of all species collected shall be deposited at the National Environment and Planning Agency (NEPA), Biodiversity Branch, 10 Caledonia Avenue, Kingston 5 for the Natural History Division, Institute of Jamaica (IOJ). Each duplicate should bear the name of the species (or identification number/letter if unidentified), date collected, collector's name, collection site (GPS-longitude and latitude) for all species.

Note:

1. A letter of support from the institution/organisation of the applicant should be submitted with the application.
2. All specimens of endemic species and derivatives thereof remain the property of Jamaica and a Material Transfer Agreement must be signed between the applicant/institution and the National Environment and Planning Agency. An Exemption Certificate is required for all species protected under the Wild Life Protection Act. This exemption does not grant the persons the right to sell, patent, trade, barter, release into the wild or dispose of in any manner any such protected species.

I/We hereby apply for permission to conduct this research and I/We agree to submit to the Natural Resources Conservation Authority (NRCA) two (2) copies of all publications and/or other written reports arising from this research. I/We also agree that, if requested by NRCA, I/We will share field techniques with members of Staff in the use of field techniques applicable to this research.

_____ Signature of Applicant(s)	_____ Feb 2, 2012 Date
_____ 	_____ Feb 1, 2012 Date
_____ Dr Brock Fenton	

Endorsed by
[Professor /Head of Department]

FOR OFFICIAL USE ONLY

Date received: _____

Officer's recommendation.

—

—

Evaluation Result: recommended not recommended

Authority's Comments.

Date Permit Issued: _____

Indicate permits, approvals and endorsements of the proposals from other Government of Jamaica agencies and overseas agencies.

Voucher Specimen's:

Date specimens received by NEPA:

Date specimens delivered to IOJ:

Name of receiving officer at IOJ:

Total number of specimens: (.....males; females)

January 2011