

The Rufford Small Grants Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details

Your name	Jose Ismael Martinez Noble
Project title	Lepidoptera Research for Conservation in Yalahau Lagoons State Park, Yucatan, Mexico
RSG reference	14359-1
Reporting period	September-November
Amount of grant	£ 6,000
Your email address	chac_bolay@hotmail.com
Date of this report	January 10, 2015

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Creation of a list of butterfly and moth species			X	We collected 557 individuals belong to 185 morphospecies, but until now we could identify 142 species. A copy was sent to the Local Ministry of Urban Development and Environment (SEDUMA in Spanish).
Information about the environment and type of vegetation that species prefer			X	We described four types of vegetation (tropical dry deciduous forest with 80-year old trees; flooded lowland forest; tropical dry deciduous forest in succession with less of 30 years old; disturbed area which included crops.
The first collection of larvae and adults of Lepidoptera in the State of Yucatan		X		Until now we curated the 77% of the total number of species. This will be deposited in the zoological collection of the Autonomous University of Yucatan
Photographic catalogue and a website		X		We are waiting for the expert revision to upload the website.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

Unfortunately we didn't count with amount of the Autonomous University of Yucatan, however we could finished the project with the Rufford's grant and personal funding.

3. Briefly describe the three most important outcomes of your project.

- The list of species will be very helpful for many scientists in the research of ecology and conservation of Lepidoptera.
- The Lepidoptera collection of larvae and adults will be used to academic formation of students and as research material.
- The website will serve as support to many people both scientists in the research and conservationists to increase awareness in general public.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

Homun Town is the most benefited with this project, because we could work with many people of this place and they could learn about the butterflies and moths. Also we showed them what is the butterflies and moth importance in the environment and why these organisms are necessities for them. Secondly the Autonomous University of Yucatan offered its support with two keynote science lectures the first about conservation and second about ecology.

5. Are there any plans to continue this work?

Yes, we had planned carry on with this project, because the Yalahau Lagoons need more research studies, especially in the entomology area. Currently we explored only the 40% of the reserve, due mainly by the size and access to the reserve difficult to work. However we could found 185 morphospecies in this area making this place good for conservation and research mainly because Yalahau contain one of few flood lowlands of Yucatan and it is the less studied protect area.

6. How do you plan to share the results of your work with others?

The list of species we will try to publish it in a scientific paper, until now we are working in it and we plan submit to revision in February or March.

The collection will be deposited in the Regional Entomological Collection of Campus of Biological and Agricultural Sciences at UADY in January 2015.

The website will be already in January 2015.

7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?

During the all year was used the RSG and we comply with the time set. Only the website was delayed because the reviewers of the species take too much time.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
4 Collapsible net set	76	80	4	New price of BioQuip products,
16 Packes of 100 glassine envelopes (121x171mm)	67	68	1	
10 standard insect boxes	258	263	5	
4 Head lamps	41	42	1	
4 Night collecting lights AC/DC. 15 watt BL	260	264	4	
8 butterfly bait traps lip type	330	334	4	
2 pinning and 2 rubis forceps	32	34	2	
20 packages of entochrysis insect pins sice 0	62	57	-5	
4 night collecting sheets	249	435	186	
42 packages of diplay vials	190	173	-17	
2 micro dissection kits	53	53	0	The same price of BioQuip products,
2 spade tip butterfly forceps	4	8	4	New price of BioQuip products,
3 Cornell university system cabinets for 6 drawers	995	1009	14	

18 Cornell university drawers	632	570	-62	
Camera EOS Rebel T5i 18-55mm IS STM Kit	585	495	-90	New price of Canon USA.
Gas	650	800	150	Increase in the price of gasoline
Meals	600	750	150	Increase in the price of meals
Lodging	591	700	109	Increase in the price of housing.
Website construction	325	40	-285	Web hosting annually pay
TOTAL	6000	6175		

9. Looking ahead, what do you feel are the important next steps?

Increasing the list of species and collection if it is possible, also we will try to work with community especially in ethno-entomology area; to know the role of insects play in the Mayan culture.

10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?

I used the logo in two keynote science lectures and the website.

11. Any other comments?

In spite of we don't count with the amount of Autonomous University of Yucatan but, we could finish the project.

Butterflies and moths species list of Yalahau Lagoons State Park

SPECIES

PAPILIONOIDEA LATREILLE, 1802

PAPILIONIDAE (Latreille, 1802)

Papilioninae (Latreille, 1802)

- Eurytides epidaus epidaus* (Doubleday, 1846)
Eurytides philolaus philolaus (Boisduval, 1836)
Papilio thoas autocles Rothschild & Jordan, 1906
Papilio ornythion Boisduval, 1836
-

PIERIDAE (Swainson, 1820)10

Coliadinae (Swainson, 1821)

- Abaeis nicippe* (Cramer, 1779)
Anteos clorinde (Godart, [1824])
Anteos maerula (Fabricius, 1775)
Eurema boisduvaliana (C. Felder & R. Felder, 1865)
Eurema दौरa eugenia (Wallengren, 1860)
Eurema salome jamapa (Reakirt, 1866)
Phoebis agarithe agarithe (Boisduval, 1836)
Phoebis sennae marcellina (Cramer, 1777)
Phoebis philea philea (Linnaeus, 1763)
Pyrisitia dina westwoodii (Boisduval, 1836)
Pyrisitia nise nelphe (R. Felder, 1869)
Pyrisitia proterpia (Fabricius, 1775)
-

Pierinae (Swainson, 1820)

- Ascia monuste monuste* (Linnaeus, 1764)
Ganyra josephina josepha (Salvin y Godman, 1868)
Glutophrissa drusilla tenuis (Lamas, 1981)
-

NYMPHALIDAE (Rafinesque, 1815) 35

Apaturinae (Boisduval, 1840)

- Doxocopa laure laure* (Drury, 1773)
-

Biblidinae (Boisduval, 1833)

- Biblis hyperia aganisa* Boisduval, 1836
Dynamine postverta mexicana d'Almeida, 1952
Eunica monima (Stoll, 1782)
Eunica tatila tatila (Herrich-Schäffer, [1855])
Hamadryas februa ferentina (Godart, [1824])
Hamadryas feronia farinulenta (Fruhstorfer, 1916)
Hamadryas glauconome glauconome (H. Bates, 1864)
Hamadryas guatemalena guatemalena (H. Bates, 1864)

- Hamadryas julitta* (Fruhstorfer, 1914)
Mestra amymone (Ménétriés, 1857)
Myscelia ethusa ethusa (Doyère, [1840])
Temenis laothoe hondurensis Fruhstorfer, 1907
-

Charaxinae (Guenée, 1865)

- Anaea aidea* (Guérin-Méneville, [1844])
Archaeoprepona demophon occidentalis (Stoffel & Descimon, 1974)
Fountainea glycerium yucatanum (Witt, 1980)
Memphis forreri (Godman & Salvin, 1893)
Memphis pithyusa pithyusa (R. Felder, 1869)
Memphis mora orthesia (Godman & Salvin, 1884)
Prepona pylene philetas Fruhstorfer, 1904
-

Cyrestinae Guenée, 1865

- Marpesia chiron* (Fabricius, 1775)
Marpesia petreus (Cramer, 1776)
-

Danainae (Boisduval, 1833)

- Danaus gilippus thersippus* (Bates, 1863)
-

Heliconiinae (Swainson, 1822)

- Agraulis vanillae incarnata* (N. Riley, 1926)
Dryadula phaetusa (Linnaeus, 1758)
Dryas iulia moderata (N. Riley, 1926)
Euptoieta claudia (Cramer, 1775)
Euptoieta hegesia meridiania Stichel, 1938
Heliconius erato petiverana (E. Doubleday, 1847)
Heliconius charithonia vazquezae W. Comstock & F. Brown, 1950
-

Libytheinae Boisduval, 1833

- Libytheana carinenta mexicana* Michener, 1943
-

Limnithidinae (Behr, 1864)

- Adelpha barnesia leucas* Fruhstorfer, 1915
Adelpha fessonia fessonia (Hewitson, 1847)
Adelpha iphicleola iphicleola (H. Bates, 1864)
-

Nymphalinae (Rafinesque, 1815)

- Anartia fatima fatima* (Fabricius, 1793)
Anartia jatrophae luteipicta (Fruhstorfer, 1907)
Anthanassa frisia tulcis (Bates, 1864)
Colobura dirce dirce (Linnaeus, 1758)
Historis odius dious Lamas, 1995
Junonia genoveva (Cramer, 1780) (Mexican segregate)
Microtia elva elva (Bates, 1864)
Siproeta stelenes biplagiata (Fruhstorfer, 1907)

Satyrinae (Boisduval, 1820)

- Cepheptychia glaucina* (H. Bates, 1864)
Cissia labe (Butler, 1870)
Cissia pseudoconfusa Singer, DeVries & Ehrlich, 1983
Cissia similis (Butler, 1867)
Cissia themis (Butler, 1867)
Hermeuptychia hermes (Fabricius, 1775)
Magneuptychia alcinoe (C. Felder & R. Felder, 1867)
Morpho helenor montezuma Guenée, 1859
Taygetis sp.
Taygetis inconspicua Draudt, 1931
Taygetis rufomarginata Staudinger, 1888
Taygetis thamyra (Cramer, 1779)
Taygetis virgilia (Cramer, 1776)

LYCAENIDAE (Leach, 1815) 10

Polyommatainae (Swainson, 1827)

- Hemiargus ceraunus astenidas* (Lucas, 1857)
Leptotes cassius cassidula (Boisduval, 1870)

Theclinae (Swainson, 1820)

- Arawacus sito* (Boisduval, 1836)
Calycopis isobeon (Butler & H. Druce, 1872)
Calycopis origo (Godman & Salvin, 1887)
Eumaeus toxea (Godart, [1824])
Evenus regalis (Cramer, 1775)
Panthiades bathildis (C. Felder & R. Felder, 1865)
Pseudolycaena damo (H. Druce, 1875)
Strymon istapa istapa (Reakirt, [1867])
Strymon rufofusca (Hewitson, 1877)
Strymon yojoa (Reakirt, [1867])

RIODINIDAE (Grote, 1827) 2

Riodininae (Grote, 1827)

- Apodemia hypoglauca hypoglauca* (Godman & Salvin, 1878)
Calephelis fulmen Stichel, 1910
Calephelis maya McAlpine, 1971
Calephelis mexicana McAlpine, 1971
Melanis pixe pixe (Boisduval, [1836])

HESPERIIDAE (Latreille, 1809)

Eudaminae Mabille, 1877

- Achalarus albociliatus albociliatus* (Mabille, 1877)
Aguna asander asander (Hewitson, 1867)
Cabares potrillo potrillo (Lucas, 1857)
Chioides albofasciatus (Hewitson, 1867)

- Chioides zilpa* (Butler, 1872)
Codatractus yucatanus H. Freeman, 1977
Cogia hippalus hippalus (W. H. Edwards, 1882)
Epargyreus aspina Evans, 1952
Polygonus savigny savigny (Latreille, [1824])
Proteides mercurius mercurius (Fabricius, 1787)
Spathilepia clonius (Cramer, 1775)
Urbanus dorantes dorantes (Stoll, 1790)
Urbanus tanna Evans, 1952
Urbanus teleus (Hübner, 1821)

Hesperiinae (Latreille, 1809) 15

- Copaeodes aurantiaca* (Hewitson, 1868)
Vettius fantasos (Cramer, 1780)

Pyrginae Burmeister, 1878

- Antigonus erosus* (Hübner, [1812])
Gorgythion begga pyralina (Möschler, 1877)
Heliopetes alana (Reakirt, 1868)
Heliopetes macaira macaira (Reakirt, [1867])
Heliopyrgus domicella domicella (Erichson, [1849])
Pellicia dimidiata dimidiata Herrich-Schäffer, 1870
Pyrgus communis (Grote, 1872)
Pyrgus oileus (Linnaeus, 1767)
Sostrata nordica Evans, 1953

NOCTUOIDEA LATREILLE, 1809

NOTODONTIDAE Stephens, 1829

Dioptinae Walker, 1862

- Lyces ariaca* (Druce, 1885)

EREBIDAE Leach, 1815

Anobinae Holloway, 2005

- Baniana* sp.

Arctiinae Leach, 1815

- Ctenucha tapajoza* Dognin, 1923
Phaloesia saucia Walker, 1854
Spilosoma latipennis Stretch, 1872

Boletobiinae Guenée, [1858]

- Isogona scindens* (Walker, 1858)

Erebinae Leach, 1815

- Ascalapha odorata* (Linnaeus, 1758)
Hypsoropha hormos Hübner, 1818
Phaloesia saucia Walker, 1854
Thysania zenobia (Cramer, [1777])
Zaleops umbrina (Grote, 1883)

Herminiinae Leach, 1815
<i>Bleptina</i> sp.
Hypocalinae Guenée, 1852
<i>Goniapteryx servia</i> (Cramer, 1782)
NOCTUIDAE Latreille, 1809
Acontiinae Guenée, 1841
<i>Spragueia apicalis</i> (Herrich-Schäffer, 1868)
<i>Calpinae</i>
<i>Bendisodes aeolia</i> (Druce, 1890)
<i>Focillidia texana</i> Hampson, 1913
<i>Latebraria amphipyroides</i> Guenée, 1852
Catocalinae Boisduval, 1840
<i>Catocala</i> sp.
Condicinae Poole, 1995
<i>Ogdoconta tacna</i> (Barnes, 1904)
ZYGAENOIDEA LATREILLE, 1809
LIMACODIDAE Duponchel, 1845
Limacodinae Duponchel, 1845
<i>Parasa minima</i> Schaus, 1892
MEGALOPYGIDAE Herrich-Schäffer, 1855
Unassigned subfamily
<i>Norape ovina</i> (Sepp, 1852)
BOMBYCOIDEA LATREILLE, 1802
APATELODIDAE Neumoegen & Dyar, 1894
Apatelodinae Neumoegen & Dyar, 1894
<i>Apatelodes torrefacta</i> (Smith, 1797)
SPHINGIDAE Latreille, 1802
Sphinginae Latreille, 1802
<i>Ceratomia</i> sp.
TINEOIDEA LATREILLE, 1810
TINEIDAE Latreille, 1810
Acrolophinae Busck, 1912
<i>Acrolophus</i> sp.
GELECHIOIDEA STAINTON, 1854
BLASTOBASIDAE Meyrick, 1894
Blastobasinae Walsingham, 1894
<i>Pigritia</i> sp.
ELACHISTIDAE Bruand, 1850
Ethmiinae Brues, Melander & Carpenter, 1954
<i>Ethmia semiombra</i> Dyar, 1902