



WELCOME TO THE



DARWIN INITIATIVE

WHAT IS BIODIVERSITY?

Biodiversity is the
“variety of life”

Of particular interest are species of economic significance, invasive species, and those which are endangered or found only in the Cayman Islands

DARWIN PARTNERS

The success of the Darwin Initiative lies in the willingness of local organisations to work together and share information, expertise and resources, towards achieving biodiversity goals...
...which will benefit the entire country



Kyle McCoy plants a mangrove in Ivanised South Sound

The Darwin Initiative is a UK government grant scheme, promoting biodiversity protection and the sustainable use of natural resources.

In 2005, the Department of Environment and the University of Exeter, along with local and international partners, were successful in a bid for a Darwin grant for the Cayman Islands.

KEY ACTIVITIES

Bringing together local and international expertise... building capacity for practical projects to benefit Cayman's biodiversity and the local livelihoods which depend upon a healthy natural environment

Biodiversity mapping of the marine and terrestrial environment using a combination of remote sensed imagery and biological survey

Accelerated, targeted conservation research and management of key species and habitats through the development of

Biodiversity Action Plans

Public awareness activities, to let everyone know what is going on... and how they can get involved...

The following Darwin Partners have already pledged their support...

Blue Iguana Recovery Programme . Cayman Humane Society . Cayman Islands Bird Club
Cayman Islands Orchid Society . CaymanNature . Cayman Wildlife Connection
Department of Agriculture . Department of Environment . Duke University . Garden Club of Grand Cayman .
Mosquito Research and Control Unit . National Trust for the Cayman Islands . Queen Elizabeth II Botanic Park
Royal Botanic Gardens Kew . Royal Society for the Protection of Birds . Shade Brigade . University of Exeter

CAYMAN ISLAND'S



BIODIVERSITY ACTION PLAN



WHAT IS A BIODIVERSITY ACTION PLAN?

An Action Plan is a list of **steps which need to be taken** to safeguard the diversity of life in the Cayman Islands

If we follow the plan and achieve the targets, the **Cayman Islands** will maintain the diversity of its natural habitats...

... a local commitment to the global goal of **zero extinction**

Plans will be developed for:

SPECIES:

threatened species, such as the Blue Iguana
species of commercial importance such as conch, grouper and lobster
unique species, those which are found only found in the Cayman Islands
and species of cultural importance, such as the Silver Thatch Palm...

... it is **not just the rarities** which need an action plan
It is easier to protect our environment before it is critically endangered

HABITATS:

pristine examples of **all the habitats** which form the Cayman Islands
habitats which support endangered, endemic species
habitats which provide important ecological and economic services
habitats which support an unusual diversity of species

... after all, there is little point in protecting species if the habitat on which they depend is lost

Target areas include:

Policy and legislation

The draft National Conservation Law is vital to the implementation of ALL biodiversity action plans. The passing of this law is crucial to the environmental future of the Cayman Islands

Safeguards and management

Practical conservation measures to ensure the long-term health of our natural environment

Advisory

Governmental advisory measures, to ensure that all relevant sectors are aware of biodiversity issues

Research and monitoring

Scientific investigations required to assess the status of natural populations, and the success of conservation projects

Communications and publicity

Targeted education and awareness campaigns

Grand Cayman Blue Iguana
Caribbean Reef Squid
Gaudy Sphinx Moth Caterpillar
Grand Cayman Parrot





SPECIES: Grand Cayman Blue Iguana

Cyclura lewisi (Grant.)



1. INTRODUCTION

Taxonomy

The Grand Cayman Blue Iguana, *Cyclura lewisi* Grant, is endemic to the island of Grand Cayman. Closest relatives are *Cyclura nubila* (Cuba), and *Cyclura cychlura* (Bahamas); all three having apparently diverged from a common ancestor some 3 million years ago.

Status

2002 surveys indicate a wild population of 10-25 individuals.

Natural history

While it is likely that the original population included many animals living in coastal environments, the Blue Iguana now only occurs inland, in natural xerophytic shrubland, and along the margins of canopy dry forest / shrubland. The adults are primarily terrestrial, occupying rock holes and low tree cavities. Younger individuals tend to be more arboreal. Like all *Cyclura* species the Blue Iguana is primarily herbivorous, consuming leaves, flowers and fruits. This diet is very rarely supplemented with insect larvae, crabs, slugs, dead birds and fungi. Hatchlings are preyed upon by the native snake *Alsophis cantherigerus*. Adults have no natural predators. The age of sexual maturity is typically 3 years. Natural longevity in the wild is unknown, but is presumed to be many decades. One captive in the USA died at 67 years of age.

ASSOCIATED HABITAT PLANS	ASSOCIATED SPECIES PLANS
Shrubland	<i>Scolosanthus roulstonii</i>
Agricultural land	Banana Orchid <i>Myrmecophila thompsoni</i>
	Silver Thatch Palm <i>Coccothrinax proctorii</i>



2. OBJECTIVES & TARGETS

Objectives and targets of this BAP are based on formulations of the *Species Recovery Plan for the Grand Cayman Blue Iguana, Cyclura lewisi 2005-2009*.

OBJECTIVES	TARGET
1 Acquire and protect xerophytic shrubland in eastern Grand Cayman sufficient to support one thousand Blue Iguanas (requirement 300 - 500 acres).	2008
2 Restore, maintain and protect free-roaming Blue Iguanas in natural habitats.	Ongoing - 2007
3 Provide genetically optimal animals for reintroduction through the existing on-island captive breeding and head-starting programme.	Ongoing - 2006
4 Safeguard against catastrophic loss of Grand Cayman Blue Iguana populations by developing the off-island captive breeding population.	Ongoing
5 Ensure sustained support for the conservation of the Blue Iguana through targeted education and awareness programmes.	Ongoing
6 Secure sufficient financial, technical and human resources for the long-term sustainability of the Blue Iguana Recovery Programme.	2006



3. CURRENT STATUS

The Grand Cayman Blue Iguana is critically endangered (IUCN Red List). The population is restricted to the east interior of Grand Cayman, where it was reduced to a critically low density prior to the first survey (1938). Their range has contracted significantly over the last 25 years, with many sites once populated now showing no signs of wild iguanas. The most recent survey, in 2002, indicates a total population in the range of 10-25 individuals. By 2005 any young being born into the unmanaged wild population were not surviving to breeding age, making the population functionally extinct. *Cyclura lewisi* is now the most endangered iguana on Earth.

a. Legal and Policy Status

Cyclura lewisi is protected under the National Conservation Law (Schedule 1.)

The Department of Environment is the lead body for legal protection.

b. Major Factors Affecting this Species

Traditional habitat loss - fossil records indicate that beach-ridge habitat was, historically, a favoured habitat for *C. lewisi*. This area has been a primary focus for development since 1960s, and intersected by a busy coastal road since 1980s.

Remnant habitat fragmentation - interior habitat has been degraded through land conversion, change in agricultural practice (grazing replacing traditional fruit farming), and proliferation of the roads network.

Hunting - historically (for food / mistaken for crop-pest).

Poaching - endangered status of *C. lewisi*. may have encouraged recent incidents of theft.

Non-native species - predation of youngsters (rats, cats) and adults (dogs).

Road kill - attraction to roads surface for thermo-regulation, expanding roads network, circum-island road, increasing traffic.

4. CURRENT LOCAL ACTION

The National Trust for the Cayman Islands established the Blue Iguana Recovery Programme. Based at the QEII Botanic Park, Grand Cayman, this incorporates a successful captive breeding / release programme.

The Recovery Programme currently employs three full-time staff (two salaried), and delivers ca. 100 hatchlings per year. Directed by Fred Burton, the programme is assisted by a consortium of local and international specialists. Management strategy is implemented through a *Species Recovery Plan*, updated on a 4-yearly basis.

The restored, free-roaming QE II Botanic Park subpopulation, breeding since 2001, now numbers ca. 125 individuals (as of Dec 2005). The restored free-roaming Salina Reserve subpopulation is expected to start breeding 2006.

Expanding education and merchandising programme, with strong internet support through www.Bluelguana.ky. Development of a self-financing strategy to cover core programme costs, through revenue-generating nature tours of the captive breeding facility.



5. PROPOSED LOCAL ACTION

ACTION	LEAD	PARTNERS	TARGET	MEETS OBJECTIVE
Policy & Legislation				
PL1. Targeted awareness towards the promotion of the National Conservation Law	DoE	NT	2006	1,2
PL2. Implementation of Species Recovery Plan	BIRP	DoE NT BP	Ongoing - 2008	1-6
PL3. Mobilize volunteer support for food collection and expand / improve volunteer programme	BIRP	NT	Ongoing	6
PL4. Develop a business plan to develop revenue lines and ensure long-term financial sustainability of Recovery Programme, including core staff salaries.	BIRP	NT IRCF DWCT	2006	6
Safeguards & Management				
SM1. Identify land acquisition options, prioritize for establishment of shrubland reserve	NT	EAC	2006	1,2
SM2. Negotiate and purchase shrubland reserve with local landowners	DoE	NT, LO	2008	1,2
SM3. Request international contributions and matched Crown contributions of land / funds for reserve establishment	DoE		2006	1,2
SM4. Establish inalienable protected shrubland area of ca. 500 acres	DoE	NT	2007	1,2
SM5. Joint management agreement and nature tourism strategy for sustainable financing of reserve	DoE NT		Ongoing - 2008	1,2
SM6. Suitable habitat in Salina and Botanic Park filled to capacity	BIRP	NT	2007	2
SM7. Optimize genetic diversity of worldwide breeding strategy and expand to 225 individuals / 20 founder lines	BIRP	SDZ	Ongoing - 2007	3,4
SM8. Improve dietary supply, content and diversity	BIRP	NT	Ongoing	2
SM9. Security improvements at breeding facility	BIRP	DoE	2006	2
Advisory				
A1. Recommend amendment of gazetted road corridor through critical east interior habitat	DoE	NT	2006	1,2
A2. Train Government officers / key personnel in identification of <i>Iguana iguana</i> and <i>Cyclura lewisi</i>	BIRP	DoE	2006	6



CAYMAN ISLANDS
BIODIVERSITY ACTION PLAN
 WWW.CAYMANBIODIVERSITY.COM



ACTION	LEAD	PARTNERS	TARGET	MEETS OBJECTIVE
Research & Monitoring				
RM1. Identify capacity of additional areas for re-stocking (Barkers, Mastic, Wilderness Farm etc.)	BIRP	NT DoE CIG	2006	2
RM2. Develop and test methods of non-native predator control for managed iguana habitats	BIRP	DoE	2007	2,6
RM3. Assess the ecological impact of <i>Iguana iguana</i> on <i>Cyclura lewisi</i>	BIRP	DWCT ISG DoE	2006	2,6
RM4. Quantify genetic structure of wild and captive populations	BIRP	SDZ	2006	3
RM5. Publish existing data on Blue Iguana diet	BIRP		2006	2,3
RM6. Regular health screening of captive populations	BIRP	WCS DoA	Ongoing	2
RM7. Construct quarters for visiting scientists	BIRP	DoE	2007	6
Communication & Publicity				
CP1. Targeted awareness campaign to key sectors of Government and local community	NT	DoE	2006	5
CP2. Local and international media campaign	NT	DoE BIRP	Ongoing - 2006	5
CP3. Launch of educational DVD / schools packs	BIRP	NT	2006	5
CP4. Islandwide awareness of differences between <i>Iguana iguana</i> and <i>Cyclura lewisi</i>	BIRP	NT IRCF DoE	Ongoing - 2007	5
CP5. Construction of interpretative centre / classroom	BIRP	DoE NT	2006	5
CP6. Develop and expand mechanizing lines	BIRP	NT IRCF	Ongoing	5,6

Abbreviations

BIRP	Blue Iguana Recovery Programme
BP	Queen Elizabeth II Botanic Park
CIG	Cayman Islands Government
DoA	Department of Agriculture
DoE	Department of Environment
DWCT	Durrell Wildlife Conservation Trust
EAC	Environmental Advisory Committee
HS	Humane Society
IRCF	International Reptile Conservation Foundation
LO	Land Owners
MRCU	Mosquito Research and Control Unit
NT	National Trust for the Cayman Islands
RBGK	Royal Botanic Gardens Kew
RSPB	Royal Society for the Protection of Birds
SDZ	San Diego Zoo



6. REFERENCES

Brunt, M.A. & Davies J.E. (1994) (eds.) The Cayman Islands Natural History and Biogeography. Kluwer Academic Publishers.

Burton, F.J. *et al.* (2000) The Grand Cayman Blue Iguana *Cyclura nubila lewisi* Species Recovery Plan 2001 - 2006.

Burton, F.J. *et al.* (2006) Species Recovery Plan for the Grand Cayman Blue Iguana, *Cyclura lewisi* 2005-2009.

Burton, F.J. (2004) Revision to Species of *Cyclura nubila lewisi*, the Grand Cayman Blue Iguana. *Caribbean Journal of Science, Vol. 40, No. 2, 198-203.*

7. LINKS and FURTHER INFORMATION

Department of Environment / Darwin Initiative
Blue Iguana Recovery Programme
National Trust for the Cayman Islands
International Reptile Conservation Foundation
Durrell Wildlife Conservation Trust

www.CaymanBiodiversity.com
www.Blueiguana.ky
www.NationalTrust.org.ky
www.ircf.org
www.durrellwildlife.org

“Too Blue to Loose” - educational DVD

8. CONTACT

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