

# Reptilewatch Level 2 – widespread



No experience required, training is needed



Six surveys, **March–October**



Spend **1–2 hours** visually searching and checking artificial refugia



**Record** any wildlife that you see



**Take photos**, especially if you are not sure of what you have seen

**SUBMIT**

Complete the survey form and **submit your results**



# Where to survey (*Lev. 2 - widespread*)

Site of your own choice **or** one provided to you by Natural Environment.

Sites assigned to 500 m grid to spread effort.

Make sure you have **permission from the landowner** and it is **safe** to do so.

**Landowner permission:** If you have chosen a site of your own, get permission and fill out a **Landowner Survey Consent Form**.



# When to survey (*Lev. 2 - widespread*)

**Time of year:** March–October

Reptiles rely on heat from the sun to regulate their body temperature. Better chances in the spring (April to June) and autumn (mid-August to mid-October).

**Time of day:** Depends on the weather, but peaks of activity are generally in the morning and afternoon.

Good conditions include days with sun or partial cloud between 10 and 20°C.

Strong wind and heavy rain are generally bad, but sunny periods after rain can be productive. Long periods of hot dry weather are not favourable.

**Number of surveys:** **Six**, aiming for **3 visits in spring, 2 visits in autumn.**



# What might you see on a reptile survey?

## **Reptiles** (adults, juveniles, sloughs (skin) and eggs)

Slow worm (*Anguis fragilis*)

Green lizard (*Lacerta bilineata*)

Wall lizard (*Podarcis muralis*)

Grass snake (*Natrix helvetica*)



## **Alien reptiles**

Corn snake (*Pantherophis guttatus*)

Red-eared slider (*Trachemys scripta elegans*)

## **Amphibians**

Western toad / crapaud (*Bufo spinosus*)

Palmate newt (*Lissotriton helveticus*)

Agile frog (*Rana dalmatina*)



# What might you see on a reptile survey?

## Small mammals (adults, juveniles, nests, faeces, burrows)

Bank vole (*Myodes glareolus* ssp. *caesarius*)

Wood mouse (*Apodemus sylvaticus*)

Lesser white-toothed shrew (*Crocidura suaveolens*)

Millet's, Common or French shrew (*Sorex coronatus*)\*

## Cockroaches

Tawny cockroach (*Ectobius pallidus*)

Lesser cockroach (*Ectobius panzeri*)

## Beetles

Glow worm (*Lampyris noctiluca*)

Lesser stag beetle (*Dorcus parallelipipedus*)



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# What might you see on a reptile survey?

## Butterflies and moths (adults, caterpillars, cocoons)

Family Lasiocampidae

Drinker (*Euthrix potatoria*)

Fox moth (*Macrothylacia rubi*)

Oak eggar (*Lasiocampa quercus*)

Subfamily Arctiinae (Tigers and ermines)

Shoulder stripe (*Earophila badiata*)

Photo: Tim Ransom



## Spiders

## Ants

## Plants



# What species? (*Lev. 2 - widespread*)

You can record any wildlife, **BUT** we are particularly interested in observations of reptiles.

If you have received training and feel sufficiently competent, you can **opt-in** to record some **supplementary species**. These consist of four groups:

1. Small mammals
2. Cockroaches
3. Beetles
4. Butterflies and moths



Photo: Tim Ransom

# How to survey (*Lev. 2 - widespread*)

## Equipment:

- Reptilewatch JE survey form - Level 2 widespread (available from <https://groups.arguk.org/jarg>)
- pen or pencil
- map of survey site
- mobile phone (for emergencies)
- 10–20 artificial refugia (available from Natural Environment)

## *Optional (recommended):*

- camera (a smart phone camera is fine)
- species ID guides
- Global Positioning System (GPS) / GPS phone app that allows you to record coordinates
- Short-range binoculars



# How to survey (*Lev. 2 - widespread*)

**Step 1:** Download a survey form and complete the Volunteer Working Agreement.  
Return the agreement to the address shown.



Growth, Housing and Environment,  
Howard Davis Farm, La Route de la Trinité,  
Trinity, Jersey, JE3 5JP  
Tel: 01534 441600  
Email: [environmeninqueries@gov.je](mailto:environmeninqueries@gov.je)

## Volunteer Working Agreement Form



**Amphibian and Reptile Groups of the UK**  
VOLUNTEERS WORKING FOR THE CONSERVATION OF AMPHIBIANS AND REPTILES

This form is for the purpose of registering as a volunteer with Jersey Amphibian and Reptile Group (JARG) affiliated under ARG UK CIO (Charity no 1165504) part of ARG UK. I understand that I am not under any obligation to carry out voluntary work for ARG UK nor is ARG UK under any obligation to use my services.

### Volunteer details

Full name:		Contact number:	
Correspondence address:			
Post code:			
Emergency contact name:		Emergency contact number:	

### Important information

Before signing this form please read the following consent information carefully. It explains how your information will be used and provides a brief description of your rights under Jersey's Data Protection Law. For further information on how the Department of the Environment handles personal data please visit <http://www.gov.je/howweuseyourinfo>

### Your Consent - I am aware and agree

That the personal information supplied in this form, together with any other accompanying information, to be used for the sole purpose of processing my application to volunteer for ARG UK and I understand that it's an offence to knowingly submit false or misleading information with an application.

To my personal information being shared with your insurance provider in the event that it is necessary for me to make an insurance claim.

That any information I collect during my volunteering activities will be shared with other interested parties (such as the Jersey Biodiversity Centre) and will be used to provide published statistical data and reports.

I understand that under Jersey's Data Protection Law I have the right to withdraw my consent to the further processing of my information. (Should you wish to exercise this right please contact us on tel. 441600)

I have received sufficient training and/or instructions for the planned activities and believe that I am fit and healthy enough to carry out the voluntary work involved. I understand that it is my responsibility to consult my doctor if I have any concerns about my health prior to carrying out any volunteer work for JARG Jersey.

I understand that I should not do anything that I do not feel qualified to do and that I should not put others or myself in danger during the course of any voluntary activities and that I should contact the JARG Jersey co-ordinator for further advice and/or training if necessary.

I have read and understood the Surveying and Monitoring Risk Assessment (attached) and Lone Working Procedures (detailed below). I understand that the purpose of these documents are to remind me of any potential risks and I should use these to make my own assessment(s) prior to commencement of each volunteering activity.

# How to survey (*Lev. 2 - widespread*)

**Step 2:** Visit your chosen site during the day at least four weeks prior to surveying to:

- Familiarise yourself with the site and assess any risks. Update the risk assessment as necessary.
- Plan a 1–2 hour walking survey route that encompasses the most suitable reptile habitats.
- Make a note of potential places you could lay artificial refugia
- Assess and record the connectivity and patch size of reptile habitat at your survey site

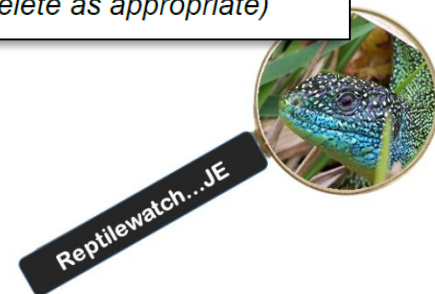
# How to survey (*Lev. 2 - widespread*)

Fill in your contact details on the form.

Reptilewatch JE widespread survey form – Level 2		v1.1	
<b>Reptilewatch JE – Level 2 survey form 20__</b>			
Volunteer Working Agreement form submitted?		<input type="checkbox"/>	Survey training attended?
		<input type="checkbox"/>	
<b>Contact details</b>			
Name	<input type="text"/>	Email	<input type="text"/>
Tel	<input type="text"/>	Can we contact you if necessary?	<input type="text" value="Yes / No"/>

Record the site details (name and location).

<b>Site details</b>			
Site name	<input type="text"/>	Site grid reference	<input type="text"/>
Site location (address or description)	<input type="text"/>		Post code
Have you completed a Landowner Survey Consent Form?		<input type="text" value="Y / N"/>	(delete as appropriate)



# How to survey (*Lev. 2 - widespread*)

Assess the connectivity and patch size of reptile habitat at your survey site.

*Your notes from your site visit and aerial views using tools such as google maps will be helpful. If stuck contact the survey coordinator for assistance.*

## Site assessment (refer to survey manual)

### Habitat connectivity

Which of the following best describes reptile habitat at your survey site? (tick **one** only)

- Completely isolated from other areas
- Isolated by sub-optimal habitat
- Linked by corridors of good habitat
- Part of a larger area of good habitat


### Patch size

Estimated patch size of reptile habitat at your survey site (tick **one** only)

- <1 ha
- 1–5 ha
- 6–10 ha
- 11–50 ha
- >50 ha




# How to survey (*Lev. 2 - widespread*)

**Step 3: Site Visit 2** (ideally four weeks prior to first survey).

During this visit you will lay your refugia and carry out your survey route habitat assessment.

- *Set out your 1–2 hour walking survey route that encompasses the most suitable parts of the site.*
- *A map of the site can be useful for doing this.*
- *Plan the route ahead of time and discuss it with the landowner.*
  - *There may be areas that aren't suitable for refugia due to livestock, or planned land management activities.*
- *Consider how the habitat changes and break the survey route into sections based on habitat type.*
- *Enlist a friend or survey buddy to help – mats are awkward to carry on your own!*

# How to survey (*Lev. 2 - widespread*)

**Lay out 10–20 artificial refugia along the route.**

*Note if permission was refused for any areas*

## **Recommendations:**

Spread them evenly, choosing areas away from disturbance

Press in to the vegetation and let them bed in before surveying

Record their location on a map or using GPS and share with landowner

Record the details on the 'refugia list' on the survey form



**Refugia list** (Use this table to keep track of your refugia and whether they have been checked on each survey)

Refugium ID	Material	Section number	Visit number (tick if refugium checked on visit)						Notes
			1	2	3	4	5	6	

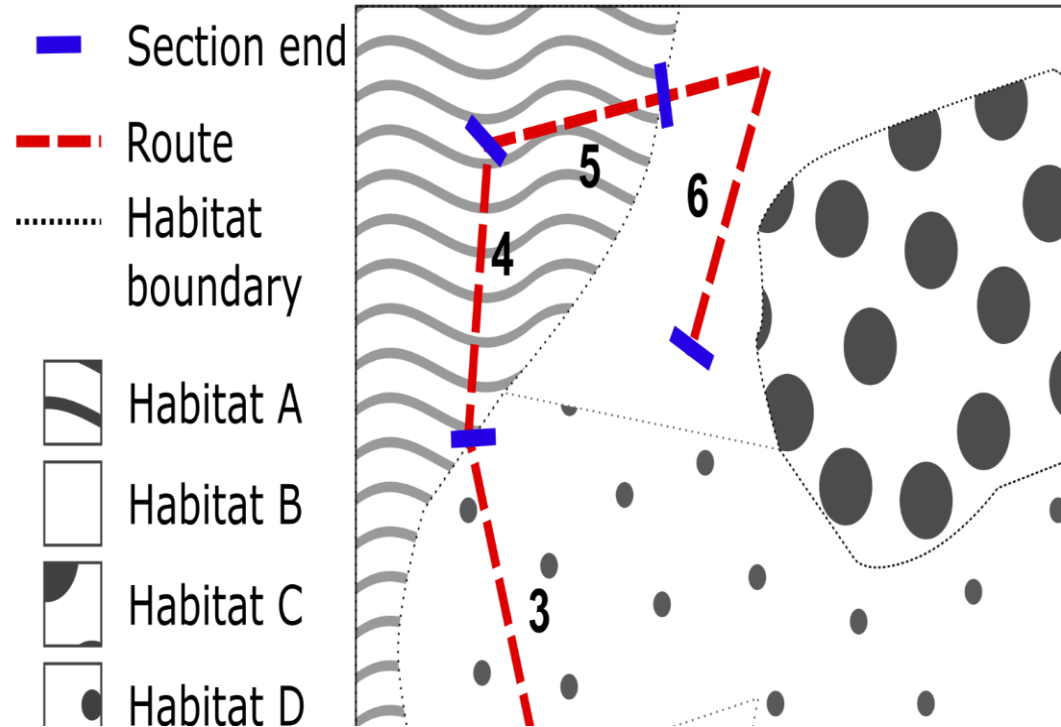


# How to survey (*Lev. 2 - widespread*)

**Assess the habitat** along your survey route and divide it in to sections based on habitat type.

*Record:*

- *the length of each survey route section*
- *the coordinates where the route sections start and end*
- *the route section each refugium is in*



**Survey route table** (refer to survey handbook)

Was permission refused for any areas?

**Yes / No**

How many artificial refugia did you lay out?

**Describe the sections of your survey route.** (See handbook)

Section number	Section Details	No. refugia	Section Habitat Type	Habitat code	Approx. Length (m) e.g. recorded via google maps
Example	Track from interpretation panel walking past scrub and bramble to the sluice gate	1-3	Dense scrub	h3	150
1					
2					

# How to survey (Lev. 2 - widespread)

**Step4: Register your site** *Please see the separate presentation on submitting your results for full details.*

- Please go online and register your site with the [Jersey Biodiversity Centre](#).
- You will need a Jersey Biodiversity Centre account and you will need to be invited to fill out the appropriate online forms by your coordinator before you can register your site or enter your data.
- When you register your site online you will draw your survey route/areas on the map and will plot your refugia and upload their coordinates.
- If using a GPS you can record the start and end coordinates for each survey route section.



# How to survey (*Lev. 2 - widespread*)

**Step 5: DOING THE SURVEYS** - **six** surveys March–October

**Three** in spring (April–June), **two** in autumn (mid-August to mid-October)

Record the date, visit number, start time, cloud cover and which (if any) supplementary species you are recording.

## Survey conditions

Visit no.:	Average wind speed (0–6, circle one option).	Code	Specifications on land	Rain (0–3, circle one option).  0 = none 1 = yesterday 2 = earlier today 3 = during survey	
Date:		0	Smoke rises vertically		
Start time (24h):		1	Slight smoke drift		
End time (24h):		2	Wind felt on face and leaves rustle		
Time spent surveying (mins):		3	Leaves & twigs in constant motion		
Air temperature (°C):		4	Raises dust and small branches move		
Cloud cover (%):		5	Small trees in leaf begin to sway		
		6	Large branches move & trees sway		
Survey effort	No. artificial refugia checked			No. pre-existing refugia checked	
Supplementary species (which other species are you surveying for?)					
Small mammals	Yes / No	Cockroaches	Yes / No	Beetles	Yes / No
				Butterflies & moths	Yes / No



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# How to survey (*Lev. 2 - widespread*)

**Step 12:** Spend 1–2 hours searching along your route.  
Check refugia and pre-existing refugia. Take photos of what you see. Tick off refugia as they are checked.

**Refugia list** (Use this table to keep track of your refugia and whether they have been checked on each survey)

Refugium ID	Material	Section number	Visit number (tick if refugium checked on visit)						Notes
			1	2	3	4	5	6	

Record your sightings, including:

**What did you see?** (continue on another page if needed)

Time (24h)	Species	Lifestage	Sex	Qty.	Certainty C=certain U=uncertain	Position O=in open U=under ref. T=on ref.	Location	
							Route section	Refugium ID / coordinates

# How to survey (*Lev. 2 - widespread*)

**Step 12:** At the end of the survey record the end time, time spent surveying, average wind speed during the survey and rainfall. Also note the number of both artificial and pre-existing refugia checked.

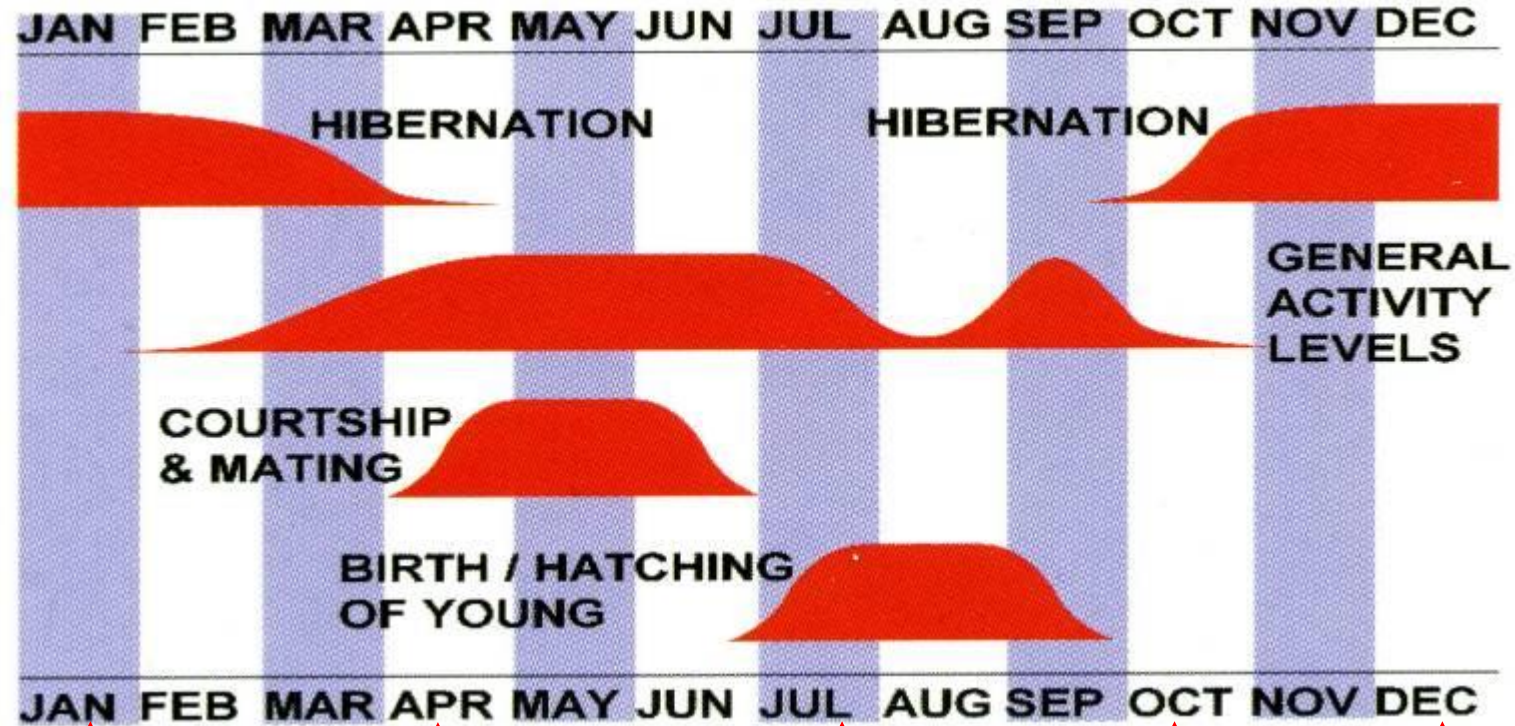
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Visit no.: 1	<table border="1"><thead><tr><th>Average wind speed</th><th>Code</th><th>Specifications on land</th></tr></thead><tbody><tr><td rowspan="6">(0-6, choose one option).</td><td>0</td><td>Smoke rises vertically</td></tr><tr><td>1</td><td>Slight smoke drift</td></tr><tr><td>2</td><td>Wind felt on face and leaves rustle</td></tr><tr><td>3</td><td>Leaves &amp; twigs in constant motion</td></tr><tr><td>4</td><td>Raises dust and small branches move</td></tr><tr><td>5</td><td>Small trees in leaf begin to sway</td></tr><tr><td>6</td><td>Large branches move &amp; trees sway</td></tr></tbody></table>	Average wind speed	Code	Specifications on land	(0-6, choose one option).	0	Smoke rises vertically	1	Slight smoke drift	2	Wind felt on face and leaves rustle	3	Leaves & twigs in constant motion	4	Raises dust and small branches move	5	Small trees in leaf begin to sway	6	Large branches move & trees sway
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Date: 30-3-20																			
⌚ Start time (24h): 11:05																			
⌚ End time (24h): 13:00																			
Time spent surveying (mins): 100																			
Cloud cover (%): 20																			
<table border="1"><thead><tr><th>Rain</th></tr></thead><tbody><tr><td>(0-3, choose one option).</td></tr><tr><td>0 = none</td></tr><tr><td>1 = yesterday</td></tr><tr><td>2 = earlier today</td></tr><tr><td>3 = during survey</td></tr></tbody></table>		Rain	(0-3, choose one option).	0 = none	1 = yesterday	2 = earlier today	3 = during survey												
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**Step 13:** Submit your results, even if you don't see anything. **Absence data is very useful!**



# Reptile survey tips

Time of year:



Bad

Best

Variable/  
Poor

Good

Bad



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# Reptile survey tips

## Time of day:

- Early spring and autumn - middle hours of the day (c.11am-3pm)
- Late spring – mid morning (c.9-11am) and late afternoon (c.4-6pm)
- Summer – short periods in morning (c.7-9am) and evening (6-8pm); hot weather can produce totally negative results



# Reptile survey methods

## Visual searching:

- Reptiles need to warm themselves up (bask)
- They often stay partially hidden or very close to cover
- Look at interfaces between vegetation types and along edges!
- Walk slowly, scanning the ground as you go



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# Reptile survey methods

## Artificial refugia:

- Used by reptiles to warm up without being visible to predators
- Both artificial and existing refugia work!
- Check and replace refugia carefully, taking care not to trap or injure animals



# Find out more

- Survey forms and handbook - <https://groups.arguk.org/jarg>
- Submit your data - <http://jerseybiodiversitycentre.org.je/>
- Identifying Invasive Non-Native plants - <http://www.nonnativespecies.org>
- Identifying dragonflies and damselflies - <https://www.british-dragonflies.org.uk>



# Quiz time !



# Quiz

What is this is and what species does it belong to?



# Quiz

What is it?



# Quiz

Which reptile is most likely to be seen on fortifications and dry stone walls?

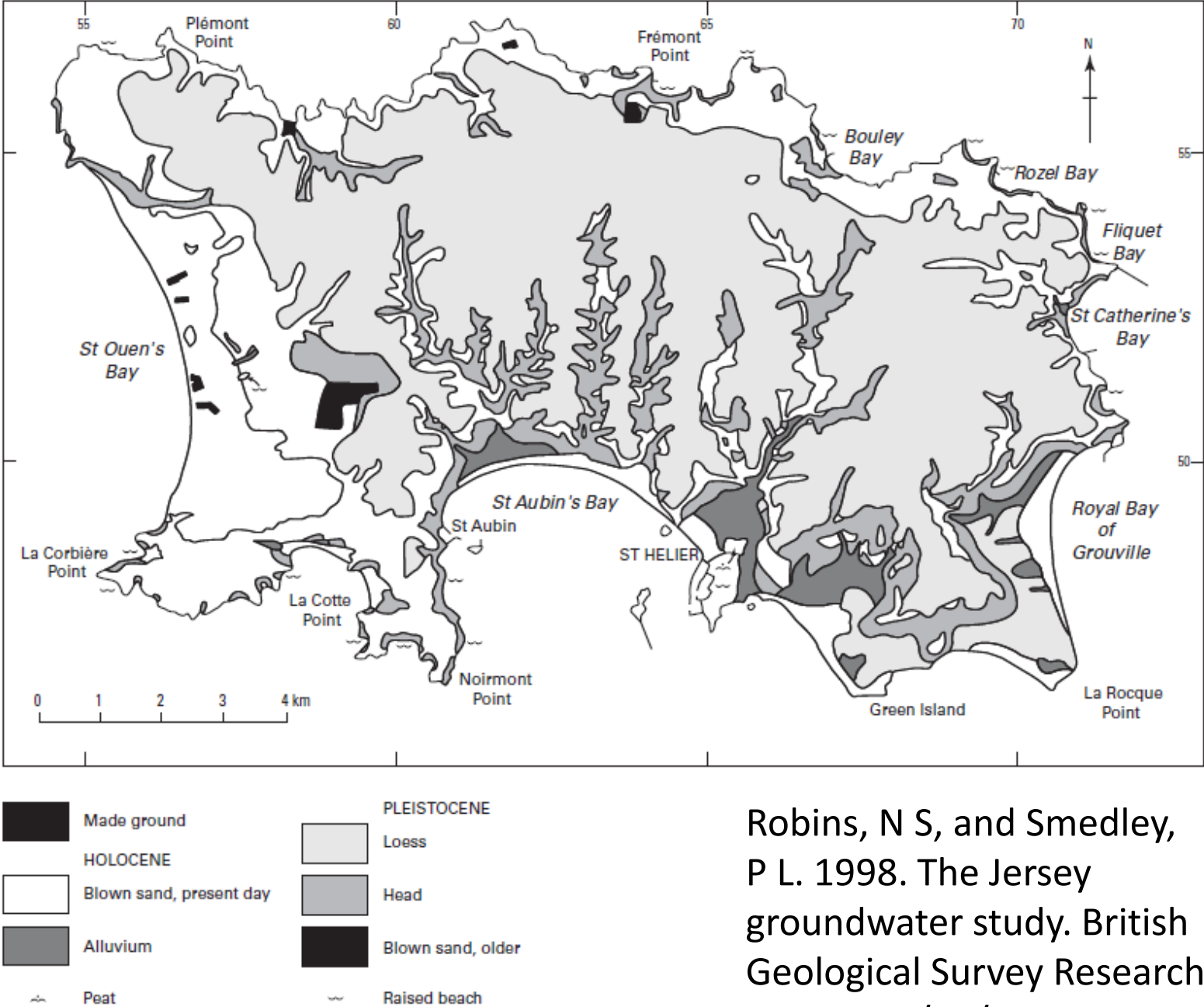


# Quiz

Artificial refugia are particularly helpful for finding which species of reptile?



**Figure 3**  
Quaternary  
geology.



Robins, N S, and Smedley, P L. 1998. The Jersey groundwater study. British Geological Survey Research Report RR/98/5. 48pp.