

A Fossil Code and Recording Scheme for the Axmouth to Lyme Regis Undercliffs National Nature Reserve.

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This document and the associated fossil code have been prepared by Natural England in collaboration with the Undercliffs Collecting Code Steering Group. The steering group is made up of representatives from Natural England, the Jurassic Coast Trust, the Charmouth Heritage Coast Centre, and a fossil collector representative.

This code advocates for responsible and safe fossil collecting within the Axmouth to Lyme Regis Undercliffs National Nature Reserve.

It encourages the recording and reporting of important fossils and their acquisition by museums and other recognised public collections. The code strengthens collaboration and communication between those with an interest in fossils from the NNR, supporting its management and that of the wider Jurassic Coast World Heritage Site (WHS).

1. Background and Context

The National Nature Reserve

The Axmouth to Lyme Regis Undercliffs National Nature Reserve and Site of Special Scientific Interest (SSSI) encompasses approximately 6 miles of landslipped undercliffs between Axmouth in Devon and Lyme Regis in Dorset. Inland, the Reserve is largely covered in dense woodland vegetation, with sea cliffs and rocky shores extending down to the low water mark. It forms part of the WHS and contains several biological, geological, palaeontological and geomorphological features, some of which are unique to the Undercliffs NNR.

The Reserve contains rocks from the Triassic, Jurassic and Cretaceous Periods. The main fossil-bearing strata are the Blue Lias Formation and the Shales-with-Beef Member of the Charmouth Mudstone Formation, both lower Jurassic in age. These rocks are a source of exceptional fossils, including fish and superbly preserved reptiles such as ichthyosaurs, plesiosaurs and very rare pterosaurs. The Upper Greensand and Chalk sequences also contain a diverse fossil fauna that includes the source of several type ammonite species. More detailed descriptions are available in the relevant Geological Conservation Review (GCR) volumes which underpin the SSSI notification (see further reading).

Originally made famous by the 19th century fossilist Mary Anning, collectors have been and remain critical to recovering fossil material that contributes to our understanding of this coastline and on-going palaeontological research. New discoveries can happen at any time, so maintaining up to date information through liaison with the scientific community and collectors is essential for a complete understanding of the site as a scientific resource. The Reserve is also important geomorphologically, for the erosion and coastal landslides that create its unique character and provide the basis for its biological diversity.

Collecting activity is facilitated by the dynamic nature of the coastline, as natural processes continuously erode the rock layers to expose more fossils. The very accessible eastern end of the foreshore, at Monmouth Beach, is particularly well visited by a variety of users including researchers,

educational groups, collectors and tourists, who may participate in fossil collecting for various reasons. This code is primarily aimed at collectors (including both amateurs and professionals) though the principles of the code will be of relevance to all other visitors. Experienced collectors often have a more detailed knowledge of the fossil interest within the NNR, and collect on a regular basis, so potentially have the best chance of recovering interesting or scientifically important specimens.

The need for a Fossil Collecting Code and Recording Scheme

Responsible collecting and recording of fossils is a critical part of how the Undercliffs NNR is managed in terms of its geology and palaeontology as well as how the site's scientific value is maintained and enhanced. It is recognised that collectors have a valuable role in recovering fossils that would otherwise be damaged and destroyed by natural erosion as well as in encouraging and supporting responsible collecting and recording.

A fossil code needs to strike the right balance between the interests of collectors and landowners, the scientific value of the site, and its practical management. Currently, collecting is managed through the local promotion of responsible and safe collecting practice, including signage on-site, leaflets and web-based information, wardening of the NNR (by Natural England and the Jurassic Coast's summer fossil warden), and the establishment of good working relationships with collectors and researchers. In order to help manage the potential collecting pressure, the fossil collecting code sets out some simple principles for responsible collecting, both *in situ* and *ex situ*, clarifies the relationship between landowner, land manager (Natural England) and collector (including ownership of fossils) and establishes a mechanism for recording important fossil finds.

To the east of Lyme Regis, the West Dorset Fossil Collecting Code and Recording Scheme has been in operation since 1998 and was reviewed in 2011/12 and 2022/2023. It is widely accepted as a practical and effective way of managing collecting and recording of scientifically important fossils (through the Charmouth Heritage Coast Centre). The Undercliffs Code is based on the West Dorset Code but has been adapted to reflect local differences in geology, ownership and legal SSSI designation and NNR status.

SSSI legislation

Under the Wildlife and Countryside Act 1981 (as amended) (WCA), owners and occupiers of SSSI land are required to seek consent from Natural England for any operation they wish to undertake themselves or permit others to undertake that is on the Operations Requiring Natural England's Consent list (the ORNEC list was previously known as the OLD list). This requirement does not extend to third parties. However, to protect SSSI interests from damaging third-party activities, the WCA includes the following offence:

'any person who without reasonable excuse intentionally or recklessly destroys or damages any of the flora, fauna, or geological or physiographical features by reason of which a Site of Special Scientific Interest is of special interest, or intentionally or recklessly disturbs any of those fauna, is guilty of an offence'

To avoid causing an offence, collectors need to ensure that their activities do not damage or disturb the SSSI's special interests. The information set out in the Undercliffs Code acts as guidance to help ensure that outcome. Collectors who choose to ignore the advice in this code may be damaging or disturbing the SSSI's special interests and, if found guilty of an offence, will be *'liable on summary conviction to a fine not exceeding £20,000 or on conviction on indictment to a fine'*.

Land and fossil ownership¹

Within the Undercliffs NNR, fossil collecting takes place on land that is privately owned though often managed by Natural England. All of the landowners in the NNR have agreed to the adoption of this code and, in the process, affirmed their ownership of fossils on their land. Adherence to the code and recording scheme outlined below allows for a legal transfer of ownership from the landowner to the collector.

Roles and Responsibilities

On the Undercliffs NNR, Natural England acts as the landowner and/or legal occupier for much of the Reserve, overseeing day-to-day management of the NNR. In addition, Natural England is responsible as a regulator concerning SSSI legislation under the Wildlife and Countryside Act 1989. Natural England should be the first point of contact for any collecting that might require a SSSI consent or extraction of any *in situ* fossils, as set out in the following collecting code. Natural England will normally inform the landowner although a collector may also wish to approach the landowner directly. Natural England will also inform and may seek advice, if necessary, from members of the Undercliffs Collecting Code Steering Group.

Further reading

Benton, M.J., Cook, E., and Turner, P., 2002. Pinhay Bay, Devon. In: Permian and Triassic Red Beds and the Penarth Group of Great Britain. Geological Conservation Review Series, No. 24, Joint Nature Conservation Committee, Peterborough, 269- 274.

Benton, M.J., and Spencer, P.S., 1995. Lyme Regis (Pinhay Bay – Charmouth). In Fossil reptiles of Great Britain, Geological Conservation review Series No. 10, 105- 111.

Cooper, R.G., 2007. Axmouth-Lyme Regis, Devon-Dorset. In Mass movements in Great Britain. Geological Conservation Review Series, No. 33, Joint Nature Conservation Committee, Peterborough, 209-223.

Dineley, D.L., and Metcalf, S.J., 1999. Lyme Regis Coast (Pinhay Bay – Charmouth) In Fossil fishes of Great Britain, Geological Conservation Review Series No 16, 360- 369.

Simms, M.J., Chidlaw, N., Morton, N. and Page, K.N., 2004. Pinhay Bay to Fault Corner and East Cliff, Dorset. In British Lower Jurassic Stratigraphy, Geological Conservation review Series No. 30, 61-82

¹ Please note the Rousdon Estate is private land. At present, there is no public access to the Undercliffs NNR through the Rousdon Estate from the A3052 coast road, nor is there any public access to Charton Bay from the South West Coast Path.

2. Undercliffs NNR Fossil Collecting Code

The fossil collecting code is aimed primarily at experienced collectors although the principles are relevant to all. By following the code, collectors are contributing to the successful management of the Undercliffs NNR with the potential for making and sharing new discoveries.

Objectives of the code:

- To encourage responsible and safe fossil collecting (in line with SSSI legislation) as well as to help manage public perception of collecting activity.
- To set out circumstances for *ex situ* and *in situ* collecting.
- To encourage recording and reporting of important fossil finds.
- To encourage the acquisition of scientifically important fossils by museums and other recognised public collections.
- To support the management and monitoring of both the NNR and Jurassic Coast WHS as well as to maintain the scientific value of the NNR and its fossil resource.
- To promote better communication between all those with an interest in fossils from the coast.
- To clarify ownership.
- To cover health and safety issues.

Fossil Ownership

Transfer of fossil ownership from the landowner to the collector is one of the key outcomes of the code. By following the code, collectors will obtain legal ownership ('good title') to specimens they collect.

This is made possible by:

- Adhering to the code, particularly the requirements for collecting *in situ* fossils.
- Recording relevant specimens via the Fossil Recording Scheme.

There are two categories of fossils recognised within the Fossil Recording Scheme: Category 1 - for key scientifically important fossils and Category 2 - for fossils of some (but not key) importance. See section on 'Fossil Recording Scheme to the Undercliffs NNR'.

Fossil collecting within the Undercliffs NNR

Type of exposure	Can I collect?
<p><i>In situ</i> rock (excluding soft mud rocks e.g., shale)</p>	<p>No <i>in situ</i> excavation or digging in any rock layer without prior permission from Natural England.</p> <p>Within the terms of the code, fossils identified within <i>in situ</i> rocks (except for soft mud rocks under certain circumstances – see below) are not considered to be at immediate risk and are therefore not considered to require emergency excavations. Natural England will liaise with the landowner as necessary and may take advice from members of the Undercliffs Collecting Code Steering Group concerning applications to collect <i>in situ</i> fossils.</p> <p>When approaching Natural England for SSSI consent to collect <i>in situ</i> fossils, you must provide the exact position (as a what3words location or 10 figure grid reference), photographs of the specimen, orientation of the specimen and stratigraphic information. Excluding the Undercliffs Collecting Code Steering Group, this information will remain confidential and help ensure that only one consent is issued for that fossil. Unless stated otherwise, SSSI consents will be time limited to 6 months, with the onus being on the collector to ensure that a specimen is collected, or the consent renewed in this time frame.</p> <p><u><i>Before you start:</i></u></p> <ul style="list-style-type: none"> ● Notify Natural England prior to any excavation work taking place (see section 6: contact details). ● Ensure that you have public liability insurance (see section 7: liability). <p><u><i>During the excavation:</i></u></p> <ul style="list-style-type: none"> ● Follow best practice, including health & safety advice, and undertake a risk assessment (see below). ● Keep the extent of any excavations to an absolute minimum. ● Use non-powered hand tools only unless otherwise agreed with Natural England. ● Ensure the following information is captured during any excavation; sequential photographs, size of the specimen and area excavated, as well as a record of associated fossils including additional specimens collected. <p><u><i>After the excavation:</i></u></p> <ul style="list-style-type: none"> ● A report to Natural England, the Jurassic Coast Trust and the Charmouth Heritage Coast Centre is to be submitted after the excavation that includes the information detailed above.

	<ul style="list-style-type: none"> ● Category 1 finds must be entered on the Recording Scheme. Though not required, we strongly encourage the recording of Category 2 fossil finds.
<p><i>In situ</i> soft mud rocks (e.g., shale)</p>	<p>No <i>in situ</i> excavation or digging in soft mud rocks without prior permission from Natural England, unless there is an immediate risk of damage or destruction by natural processes and an emergency excavation is necessary.</p> <p>In the case of emergency extractions, excavation is permitted entirely at the risk and responsibility of the collector and the following conditions must be adhered to.</p> <p><u>Before you start:</u></p> <ul style="list-style-type: none"> ● Notify Natural England prior to any excavation work taking place or as soon as it is possible to do so (see section 6: contact details). ● Make a note of the circumstances that justify the emergency excavation and take photographs before any work is carried out. ● Ensure that you have public liability insurance (see section 7: liability). <p><u>During the excavation:</u></p> <ul style="list-style-type: none"> ● Follow best practice, including health & safety advice, and undertake a risk assessment (see below). ● Keep the extent of any excavation to an absolute minimum and only recover material that is immediately threatened or vulnerable. ● Use non-powered hand tools only unless otherwise agreed with Natural England. ● Ensure the following information is captured during any excavation; a 10-figure grid reference or what3words location, orientation of the specimen, stratigraphic information, sequential photographs, size of the specimen and area excavated, as well as a record of associated fossils including additional specimens collected. <p><u>After the excavation:</u></p> <ul style="list-style-type: none"> ● A report to Natural England and the Jurassic Coast Trust is to be submitted after the excavation that includes the information detailed above. ● Category 1 finds must be entered on the Recording Scheme. Though not required, we strongly encourage the recording of Category 2 fossil finds. ● Emergency excavations - following an emergency excavation, if further work is needed to recover the remainder of the fossil, Natural England must be consulted before work continues.

	Note: if you do have concerns about a specimen ‘at risk’, please contact Natural England or the Jurassic Coast Trust (see section 6: contact details).
Ex situ	<p>You may collect loose material found on the beaches, foreshore and inland.</p> <p><u>Collecting:</u></p> <ul style="list-style-type: none"> ● Collect responsibly. If hand tools are needed, wherever possible, moderate their use. ● Power tools must not be used without prior consent from Natural England. ● Please avoid breaking up larger blocks/boulders and the use of sledgehammers unless justifiable in the context of recovering Category 1 or 2 fossils. ● Disturbance to foreshore habitats and wildlife must be kept to a minimum. Carefully replace any disturbed blocks. ● Take care to set a good example and be mindful of the public perception of fossil collecting. ● Be aware of and respect other beach users. Act safely and ensure the foreshore is not left in a dangerous condition for those who follow. ● Vehicle access to the foreshore is not allowed. ● Use of wheeled equipment to move specimens off the beach is only permitted with prior consent from Natural England and will only be considered when recovering category 1 or 2 fossils. <p><u>Recording (see section 3: Fossil Recording Scheme for the Undercliffs NNR):</u></p> <ul style="list-style-type: none"> ● Category 1 - fossils must be recorded. ● Category 2 - recording of fossils is strongly encouraged. <p>Visible water-worn ammonites must be left. These are a renowned feature within the NNR, particularly on Monmouth Beach. They contribute hugely to how people experience and come to appreciate the palaeontological interest of the NNR and are a very significant educational asset. They should not be collected or damaged. The <i>in situ</i> ‘Ammonite pavement’ is of particular importance in this respect and must not be damaged.</p>
Scientific collecting and sampling	Researchers should liaise with Natural England regarding any <i>in situ</i> collecting requirements (as set out above).

Use of tools

Unless agreed with Natural England, all collecting activity should be undertaken with non-powered hand tools only.

Risk Assessment

Collectors are responsible for their own safety as well as that of other beach users who may be affected by their actions (see section 7: liability).

For planned *in situ* excavations (consented by Natural England), it is essential that the collector undertakes a thorough risk assessment to be agreed with Natural England prior to any work beginning on site. For emergency (unconsented) excavations, the collector is strongly encouraged to undertake an on-going/dynamic risk assessment, bearing in mind the principles below:

- Cordon off the area of working to ensure the safety of other beach users.
- Ensure, as far as practicable, the stability of the surrounding area during the excavation.
- Effective communication among all parties involved in the excavation (including the landowner), and a procedure for dealing with accidents or problems that may arise.
- Ensure, as far as practicable, that the site is safe when left unattended and that appropriate signing etc. is in place.
- Keep Natural England and the landowner informed of progress with the excavation and advise when completed.

The above list is by no means exhaustive, and collectors should satisfy themselves that all risks have been properly assessed and that all reasonable steps have been taken to reduce risk.

3. Fossil Recording Scheme for the Undercliffs National Nature Reserve

There are two categories of fossils recognised within the Fossil Recording Scheme;

Category 1: Key Scientifically Important Fossils

Includes new species or those specimens which may represent new species, fossils which are extremely rare such as the dinosaur *Scelidosaurus*, pterosaurs, and fossils that exhibit exceptional preservation.

Category 2: Fossils of some (but not key) importance

Includes vertebrates such as reptiles and fish, partial or complete, especially where the horizon of origin can be identified. Blocks with multiple ammonites or nautiloids, together with unusual assemblages of fossils, are also included.

To comply with the Undercliffs Code, all Category 1 fossils are to be recorded at the Charmouth Heritage Coast Centre. To record a specimen, please complete a recording form (<https://charmouth.org/chcc/wp-content/uploads/2017/10/RecordingForm.pdf>) and email it, with several images of the specimen, to info@charmouth.org. Alternatively, you can bring the specimen to Charmouth Heritage Coast Centre and record it with a warden, but please email or phone (01297 560772) to arrange your visit beforehand.

The recording of Category 2 fossils is strongly encouraged.

Specimens taken to Charmouth Heritage Coast Centre for recording will be handed back to the collector. Certain restrictions apply if the collector wishes to sell or otherwise dispose of Category 1 fossils (see 5. below). By adhering to the code, and recording fossils as required, ownership is transferred to the collector.

It is strongly encouraged to retrospectively record category 1 and 2 specimens collected before the code's establishment. The collector and the landowner are responsible for verifying the transfer of ownership of such specimens between themselves. The owner must also ensure that if an SSSI consent was required to collect a specimen, any associated conditions must still be adhered to.

1. All Category 1 and 2 records should include an identification of the specimen (if known), a photograph, the exact location of the find together with the stratigraphic horizon (if known), the date of the find and any other relevant observations. The name of the collector will be kept with the record but may not be available directly within public records depending upon the wishes of the individual.
2. The Charmouth Heritage Coast Centre will photograph the specimen and the record will be kept in paper form as well as in an online database. The Centre will, as and when necessary, act as an intermediary between collectors and other interested parties.
3. Where a specimen is being recovered in pieces over a protracted period, there is provision to record the multiple finds as one while still retaining details of the finders of each piece.
4. The preparation of Category 1 specimens should only proceed after consultation with appropriate academics or museum curators unless preparation is clearly straightforward or work needs to be carried out urgently.
5. Under the code, collectors who decide to sell or otherwise dispose of their Category 1 specimens must first offer them to UK registered museums and other recognised public collections (e.g. universities) for a period of six months and then for a further six months to international museums and public collections (further advice available from Natural England and the Jurassic Coast Trust). If no purchase has been agreed after this time, the collector will be free to offer the specimen elsewhere. The recording scheme should be updated accordingly. Where an important specimen has been found by a number of collectors, it is permissible for one of those collectors to take a lead and acquire the other parts in order to reunite the specimen. Each finder's name should still be recorded in recognition of their contribution. The priority here is to offer the best chance of that specimen being reunited.
6. Those individuals with private collections that contain Category 1 specimens are encouraged to make provision for the ultimate placement (e.g., in a will) of such specimens within a museum or other recognised public collection.
7. The recording scheme offers a channel of communication for curators and researchers to convey their interests to collectors. The Charmouth Heritage Coast Centre staff will relay this information to collectors and generally promote communication between all parties.

4. Health and Safety

The following is a general list of practical advice aimed at all types of collectors, including professionals and amateurs, educational/academic visitors and members of the public, including holiday makers and local people.

Site awareness

- Cliff falls tend to occur suddenly and without warning. Be vigilant, avoid the base of cliffs and exercise common sense in the vicinity of any cliffs.
- Avoid walking on, and keep clear of, visibly moving or active rock falls and mudflows. Note particularly that the seaward edges of mudflows may be covered by shingle and can be particularly treacherous.
- The foreshore is largely covered in rocks of varying sizes. These can be unstable, and it is easy to turn an ankle, so tread carefully.
- The middle and lower shores are often covered with slippery green or brown seaweed; take care.
- Incoming tides and stormy conditions can force beach users too close to dangerous and unstable cliffs, and make a return along the beach impossible. **Always consult the tide times before setting out.** It is advisable that you go collecting on a falling tide and return well before high tide.

Behaviour

- Always advise someone of where you are going and at what time you can be expected to return. Parts of the Undercliffs NNR are remote and very rough in places. Mobile phones cannot be relied upon.
- Take a personal First Aid kit with you.
- Exercise common sense when considering what clothes and safety items to wear and take with you.
- Always have regard for the safety and welfare of other beach users.
- If you are using a hammer or other tools, it is advisable to wear safety goggles.
- No one should descend or climb the cliffs using ropes to get to a particular level under any circumstances.
- Obtain permission and undertake a thorough risk assessment if you are carrying out any excavation of *in situ* material.

5. Review of the Undercliffs NNR Fossil Code

Natural England and the Undercliffs Collecting Code Steering Group will undertake a review of this code annually to identify how successful its operation has been and to identify any issues or problems that may have arisen. The review may consider matters such as:

- The number of scientifically important finds reported to the Charmouth Heritage Coast Centre.
- Any transgressions or reports of activities that undermine or fall outside the code.
- The number of emergency *in situ* excavations that have been reported or carried out.
- The number of retrospective records of fossils collected from the Undercliffs NNR prior to the establishment of the code.

If you would like to provide comments or feedback on the code and its functioning for consideration in the annual code review, please send an email to: geodiversity@naturalengland.org.uk

6. Contact information

Natural England (NNR): Tom Sunderland tom.sunderland@naturalengland.org.uk 07899 731404	Natural England: Joshua Smith joshua.smith@naturalengland.org.uk 07867 660886
Jurassic Coast Trust: Chris Reedman chris.reedman@jurassiccoast.org 01308 807000	Charmouth Heritage Coast Centre: Phil Davidson info@charmouth.org 01297 560772

7. Liability

If a collector secures permission to undertake an *in situ* fossil extraction within the Undercliffs NNR, or needs to carry out an emergency *in situ* extraction, they must have public liability insurance, regardless of whether the fossil is in danger of being lost or damaged. It is advised that collectors who anticipate undertaking *in situ emergency extractions* obtain this insurance in advance to avoid any delays.

Collectors remain responsible for their own safety as well as that of other beach users who may be affected by their actions. Natural England and the landowners take no responsibility nor liability for anyone fossil collecting within the Undercliffs NNR.

8. Data Protection Act 2018

Any consultations regarding the Undercliffs Code, as described above, will be processed in line with the Jurassic Coast Partnership Delivery Plan Privacy Policy Notice which can be found at: <https://www.gov.uk/government/publications/natural-england-privacy-notices>.

For further details on Natural England's data protection policies, please see: <https://www.gov.uk/government/organisations/natural-england/about/personal-information-charter>