



**Free Public Lecture Series, Autumn 2012**

## **BRITAIN'S COASTS TODAY – THEIR DIVERSITY AND CHALLENGES**

**Birkbeck Institute of Environment, University of London  
in conjunction with the  
Ecology and Conservation Studies Society and the Linnean Society of London**

The coast is our heritage. Maintaining our docklands is vital for an island nation. Recreational sailing from our many harbours is a popular pastime and the number of marinas has increased. Estuaries, where land meets sea, are valuable ecosystems with unique salt marsh plants and bird life. Sand dunes, traditionally enjoyed by holiday makers, are also natural sea defences, but are being exploited by commercialisation, mainly through golf course development. All this against a background of sea-level rise with cliff erosion, sea walls and barriers needed to defend our communities.

Lectures are at 6.30pm in room B04, 43 Gordon Square WC1H 0PD, on all dates except 19 Oct. and 23 Nov, see below for venues on these days. Space may be at a premium and it will be first-come first-served. Doors open at 6.00pm.

For enquiries, e-mail Dave Dawson: [ecssoc@gmail.com](mailto:ecssoc@gmail.com) (tel: 020 8946 4476)

12 Oct. **“I do like to be beside the seaside - an Introduction to Coastal Ecology”**, Dr J. Patrick Doody, Coastal Ecology Consultant.

19 Oct. **“Dungeness, its ecology and conservation”**, Dr Brian Ferry, Bedford and Royal Holloway Colleges. Venue: Birkbeck Main Building, Torrington Square, room B35.

26 Oct. **“Birds of coastal wetlands in the UK – present & future”**, Dr Malcolm Ausden, RSPB.

2 Nov. **“Using analogues to evaluate tidal energy barrages”**, Roger Morris, Coastal Consultant.

9 November, **“Managing Chichester Harbour, a balancing act”**, Alison Fowler, Chichester Harbour Environmental Manager.

16 Nov. **“Sand dunes – regaining their nature?”**, Graham Weaver, Natural England Coastal ecologist.

23 Nov. 5.30pm. A reception at the Linnean Society, followed by a final lecture in the series. **“All at sea: new directions for British coastal management”** Rhoda Ballinger, Cardiff University. Book for this via <http://www.linnean.org>.

# BRITAIN'S COASTS TODAY – THEIR DIVERSITY AND CHALLENGES

## Notes on the Contributors and their Lectures

### **12 Oct. “I do like to be beside the seaside - an Introduction to Coastal Ecology”**

Having studied biology at Sussex University Pat obtained a PhD at Durham University. The subject was 'plant population dynamics of some Teesdale rarities'. Following a stint as local conservation officer for the Nature Conservancy Council in North East England, Pat joined Derek Ratcliffe's Chief Scientist Team based in Huntingdon as the coastal specialist, again not really a coastal location. He travelled throughout the UK visiting coastal areas from Shetland to Cornwall providing management advice to local teams. Following upheavals from changes to the Government nature conservation agencies, he worked for ten years in the Joint Nature Conservation Agency as head of the Coastal Branch. Since taking early retirement in 1998, he has worked as a coastal consultant in the United Kingdom and Europe. He has written two books: on coastal ecology and saltmarshes, with a third on sand dunes due for publication in September this year.

His talk will introduce the ecology of the coastline of the United Kingdom. It will outline the key natural features and the way these develop, including the influence of the climate and sea level change. It will discuss the concept of resilience, the importance of sedimentation and the way these influence vegetation transitions and successions. Management and restoration in the face of human use and abuse will deal with 'coastal squeeze' and the threats associated with climate change.

### **19 Oct. “Dungeness, its ecology and conservation”**

Dr Brian Ferry has lectured at Bedford and Royal Holloway Colleges from 1965 to 2000, specialising initially in mycology and later in plant ecology. His research interests have varied from lichens and air pollution in the earlier days to shingle plant ecology in more recent times. During the last 30 years he has focussed on the Dungeness system on the south-east coast, where all of the above interests have been included, together with concerns for the conservation of this special site. He continues to enjoy lecturing to Birkbeck College students on ecology and conservation.

Dungeness is perhaps the largest and most developed apposition beach in the world, with some 500 shingle ridges formed over 5000 years. These are colonised by pioneer plants, tolerant of salinity and bare shingle. A primary succession follows, ending in a climax “shingle heath” on the oldest ridges, with many lichens. A consequent succession of invertebrates includes rare specialists of shingle and of geographical position and local climate. There is another primary succession in natural fresh water pits, the best known being the two Open Pits. A third primary succession is in patches of blackthorn scrub, which are colonised by epiphytic lichens over some 100 years. Dungeness has long been acclaimed by naturalists and ecologists for its wealth of plants, invertebrates and birds. These qualify it as an internationally important site. However, some 75% of the shingle ridges have been lost or damaged by gravel extraction, exploitation of fresh-water, military activity, an expanding local population and two nuclear power stations. The potential expansion of Lydd-Ashford airport is a current issue, as are the aims of ecological management.

### **26 Oct. “Birds of coastal wetlands in the UK – present & future”**

For his PhD at the University of East Anglia Dr Ausden researched the effects of raising water levels on food supply for breeding wading birds on lowland wet grassland. He then joined the RSPB to advise on the management of their 213 nature reserves and to take the lessons from these to help inform conservation practice elsewhere. His work on habitat re-creation projects has included Wallasea Island Wild Coast, other intertidal habitat re-creation projects, and the re-creation of lowland heathland, acid grassland, and calcareous grassland. He has recently been

involved with providing guidance on climate change adaptation on protected areas, improving viewing of wildlife by people at nature reserves, determining the costs of managing nature reserves, and assessing carbon storage on, and greenhouse gas emissions from, RSPB's nature reserve network.

His talk will describe how projected changes in climate are predicted to affect the extent and quality of coastal habitats for birds in the UK, and the conservation response to these changes. We expect there to be loss of saltmarsh and mudflat due to coastal squeeze, and loss of coastal freshwater and brackish wetlands through coastal flooding. The UK climate is likely to remain suitable for large numbers of wintering waterbirds, at least during the next few decades, although the assemblages of birds at individual sites will change. Also, many waterbirds are faring well in continental Europe, particularly Spoonbill, Great White Egret and Purple Heron, and may benefit here from climate change. To provide habitat for the birds for which the UK is projected to be climatically suitable, we need to re-create both intertidal habitat, through managed realignment or regulated tidal exchange, and freshwater wetlands, particularly reedbeds, away from vulnerable coastal areas, to help offset predicted losses of existing areas of these habitats. These will be illustrated by Wallasea Island Wild Coast in Essex, Europe's largest coastal wetland re-creation project, and re-creation of freshwater wetland at RSPB Lakenheath Fen Nature Reserve in Suffolk.

## **2 Nov. "Using analogues to evaluate tidal energy barrages"**

Roger Morris is a coastal management specialist with over 20 years experience of marine and coastal conservation management with the Nature Conservancy Council and its successors. He was English Nature's 'Head of Estuaries Conservation' from 1998 to 2006. He left Natural England in 2009 to establish Bright Angel Coastal Consultants. He joined the Board of Harwich Haven Authority as the non-executive Director responsible for environment. In the past three years he has had international expert assignments in the Netherlands and Germany, including advice on remediation of the Eastern Schelde Estuary and the Ems Estuary, and evaluation of Habitats Directive compliance of proposed remediation within the Elbe Estuary.

Tidal energy is a topical and controversial subject. Its advocates promote its strengths in generating large amounts of electricity. Critics cite significant 'environmental damage' but this is rarely quantified and is greatly confused by the use of the wrong analogues. This lecture explores the use of analogues as a way of determining the impact of tidal energy projects, focussing on those responses that are immediately linked to changes in the energy environment. It draws upon the experience of several European and North American examples and also the problems along the Australasian flyway as a consequence of major projects in South Korea.

## **9 November, "Managing Chichester Harbour, a balancing act"**

Alison Fowler is the Environmental Manager for Chichester Harbour Conservancy, where she has worked for over 10 years, following work as a Conservation Ranger and with farmers on the Hampshire Avon and New Forest. She finally put her Oceanography and Marine Biology degree to good use when she took over as Environmental Manager. Her role requires this varied background, as Chichester Harbour is far more than just water. It is one of England's finest landscapes with a wildlife interest of international importance and it is coming under great pressure for development and recreational use. Every day is balancing act.

Chichester Harbour may be one of the smallest Areas of Outstanding Natural Beauty in the country but it lies within the pressurised south coast, a stone's throw from Portsmouth, Brighton and London. The Harbour is also one of the busiest and most popular recreational harbours in the country. It is no surprise that people want to live here and that businesses want to be located here. Its rich soils make farming productive and its numerous footpaths and the challenging boating, make it a great draw for millions of people. The challenge that faces Chichester Harbour Conservancy and our partners is to balance the competing needs, to allow change to happen but to guide and influence its management, so that the essence of Chichester Harbour is passed on to future generations.

## **16 Nov. “Sand dunes – regaining their nature?”**

Graham Weaver is a coastal ecologist within a small team of national coastal specialists in Natural England. He has worked for Natural England and its predecessors since 1981, initially on National Nature Reserves. Increasingly office-based, he advises others how to manage and monitor habitats for wildlife, and commissions research. There has been a coastal theme running through much of his work since 1981. However, to avoid too much institutionalisation, he has also been a self-employed ecological consultant (mostly woodlands) and worked for Lincolnshire’s Rural Community Council. And in order to balance the amount of time spent in an office, he has a flock of sheep and needs to chop 10 tons of wood a year to keep the house warm.

Sand dunes often feature in images of our coastline. However, they are a rare habitat; there is over five times as much lowland heathland remaining in England. This is due to the shortage of coastal sand, and to how badly dunes have been treated in the past. Many a coastal settlement, holiday camp and caravan park sits on former dunes. Even where they survive, there have been many changes over the last 50 years, almost all to the detriment of their special wildlife. Both by design and neglect most dunes have become fixed, losing many of their open characteristics. But dynamism is the life-blood of dunes – they need to be mobile. This is a challenge both to public perceptions and to the developments now firmly established within dunes, such as golf courses.

## **23 Nov. “All at sea: new directions for British coastal management”**

Dr Rhoda Ballinger gained a degree in Geography and PhD from the University of Wales College of Aberystwyth. She now lectures in Marine Geography and Environmental Geoscience in the School of Earth and Ocean Sciences, Cardiff University. Her teaching and research interests include integrated coastal management, coastal policy and coastal risk management. She has undertaken many research projects both within the UK and Europe and published many articles in this field. She also takes a practical interest in coastal and environmental management, including involvement with the Severn Estuary Partnership and ‘Flood Risk Management Wales’.

From sand dunes to sewage treatment, reed beds to renewables.... After a brief discussion of the key characteristics of the British coast, the talk will provide an historical overview of the approaches to managing valuable coastal natural resources both along the coast and offshore. The talk will finish by considering new approaches emerging under Britain’s first ever specific marine legislation.

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**The Ecology and Conservation Studies Society** aims to foster interest in conservation based on sound ecological principles by arranging lecture courses, field visits and meetings, and by keeping its members up to date on literature, new concepts, research and practical field studies techniques. Membership is open to all who have relevant experience or interests. Non-members are most welcome at these lecture series. Web site : <http://www.bbk.ac.uk/environment/prospective/ecss>

**The Linnean Society of London** is the world’s oldest active biological society. Founded in 1788, the Society takes its name from the Swedish naturalist Carl Linnaeus (1707–1778), whose collections have been in its keeping since 1829. The Society promotes the study of all aspects of the biological sciences, with particular emphasis on evolution, taxonomy, biodiversity and sustainability. It encourages and communicates scientific advances through its three world-class journals, special publications, meetings and website. The Society also reaches out to future biologists through schools and educational programmes. Web site : <http://www.linnean.org>

**The Spring 2013 Free Public Lecture Series** will be on “Pressures on wildlife – conflicts and ecological debate”. Friday evenings 8 Feb to 15 Mar.