

# ECOLOGY OF THE TIDAL THAMES

THE TIDAL THAMES AND ESTUARY IS AN AREA RECOGNISED FOR ITS ENVIRONMENTAL IMPORTANCE. IT IS HOME TO THOUSANDS OF OVER WINTERING BIRDS, 125 DIFFERENT SPECIES OF FISH, FOUR SPECIAL PROTECTION AREAS AND EIGHT SITES OF SPECIAL SCIENTIFIC INTEREST.

THIS MAP ILLUSTRATES A FEW OF THE PLANTS, ANIMALS AND IMPORTANT HABITATS FOUND ON THE TIDAL THAMES.

**PEREGRINE**  
*Falco peregrinus*: is a large falcon with a height of 45cm. It is found throughout Europe.<sup>1</sup> It can be seen all year-round along the Thames due to the availability of ample prey (feral pigeon)<sup>13</sup>. In London they can be seen guarding their territory from a building or structure.<sup>13</sup>

**CORMORANT**  
*Phalacrocorax carbo*: is a long-necked diving bird, supreme at catching fish. It is found throughout Europe. The Thames has a residential population and also over-wintering visitors.<sup>1</sup>

**REED BEDS**  
Reed beds are rare habitats in the UK and occur from Teddington to Erith in the Thames estuary.<sup>2</sup> They are an important habitat for the water vole and birds such as the reed and sedge warbler.<sup>3</sup>

**WATER VOLE**  
*Arvicola amphibius*: is the most rapidly declining mammal in Britain. It has a large range from UK in the west to Russia and Turkey in the south.<sup>7</sup> It occurs throughout the Thames, although its habitat is highly fragmented and localised.<sup>5</sup>

**MUDFLATS**  
Mudflats support important numbers of migratory and wintering water birds, such as black-tailed godwit and avocet, that feed in the invertebrate-rich mud.<sup>4</sup> This habitat occurs throughout the tidal Thames.<sup>2</sup>

**BLACK-TAILED GODWIT**  
*Limosa limosa*: has three sub-species (polytypic) found throughout Europe. Although it is a scarce breeder along the Thames, it can occur here in internationally important numbers.<sup>2</sup>

**GLASSWORT**  
*Salicornia* sp.: is an annual plant, and part of estuarine and coastal saltmarsh. It is found in western Europe and the Mediterranean.<sup>8</sup> It is commonly seen in Thames saltmarsh.<sup>2</sup>

**COMMON TERN**  
*Sterna hirundo*: is nicknamed the 'sea-swallow' due to its elegant flight. It is found throughout Europe. It is a long distance migrator, wintering mainly in the southern hemisphere and breeds throughout the Thames.<sup>2</sup>

**SMELT**  
*Osmerus eperlanus*: is found in schools in estuaries and shallow inshore waters. It migrates upriver in the spring to upstream spawning grounds near the upstream limit of saltwater flow. It occurs from the White Sea to France.<sup>16</sup> It is abundant in the Thames and is one of the best indicators of improved river quality.<sup>17</sup>

**COMMON COCKLE**  
*Cerastoderma edule*: burrow about 5cm down into the seabed. It occurs in the eastern Atlantic and west off Nova Scotia, and also in the Mediterranean and Baltic.<sup>6</sup> The cockle fishery is a commercially important shellfish resource on the Thames.<sup>4</sup>

**DOVER SOLE**  
*Solea solea*: is mainly nocturnal and spends the day buried in the sediment. It occurs in the northeastern Atlantic, western Baltic, Mediterranean and southwestern Black Seas.<sup>6</sup> The Thames is an important fishery for this commercially important species which is abundant throughout the inner estuary.<sup>4</sup>

**GREY SEAL**  
*Halichoerus grypus*: is a large seal (2m) found on both sides of the Atlantic Ocean.<sup>6</sup> Seals use sandbanks, such as those at Margate and Long Sands, as 'haul-out' areas during the low tide period to rest.<sup>4</sup>

**COMMON HARBOUR SEAL**  
*Phoca vitulina*, can dive up to 30 minutes in search of prey. In Europe it is found in the temperate and subarctic coastal waters.<sup>6</sup> There is an important population of this species in the Thames.<sup>18</sup>

**OLIVER'S AIT**  
Oliver's Ait is one of eleven mid-channel-islands in the upper reaches of the tidal Thames. It is owned by the Port of London Authority who have a management plan for the island. It is dominated by mature trees which provide refuge for nesting and roosting birds and bats.<sup>2</sup> The rare swollen spire snail, *Mercuria confusa*, has been recorded here.

**GREY HERON**  
*Ardea cinerea*: is a large bird reaching 90cm in height. It breeds in colonies (heronries) in tree tops and reed beds. It occurs throughout Europe.<sup>1</sup> There is a breeding population throughout the Thames.<sup>2</sup>

**TENTACLED LAGOON WORM**  
*Alkmaria romijni*: is a polychaete worm, feeding mainly on microscopic plants. It has been recorded on the coasts of the Baltic, Mediterranean and North Sea.<sup>15</sup> It has been found in various subtidal habitats in the Thames.<sup>15</sup>

**SHELDUCK**  
*Tadorna tadorna*: is a large duck reaching 60cm in length with a distinctive plumage.<sup>1</sup> It occurs throughout Europe. It breeds and overwinters in the Thames.<sup>2</sup>

**OYSTERCATCHER**  
*Haematopus ostralegus*: has a bill that changes shape gradually depending on the prey source available.<sup>3</sup> It occurs throughout the coasts of Europe and is present all year round in the Thames.<sup>1</sup>

**AVOCET**  
*Recurvirostra avosetta*: is a medium-sized wader, attaining 43cm in height. The avocet is found throughout Europe and breeds and over-winters in the Thames.<sup>1</sup>

**CLIFFE MARSHES**  
Cliffe Marshes is of high importance to wading birds and home to a range of other wildlife. Its 230 hectares consist of a mix of freshwater pools, saline lagoons, saltmarsh, grassland and scrub.<sup>2</sup>

**LITTLE EGRET**  
*Egretta garzetta*: has a height of 55cm with a long slender neck. It is found in parts of southern Europe and can be seen all year round in the Thames.<sup>1</sup>

**COMMON MUSSEL**  
*Mytilus edulis*: anchors itself to the substrate by strong byssal threads.<sup>8</sup> It is found throughout Europe and forms both intertidal and subtidal beds in the Thames.<sup>4</sup>

**RED-THROATED DIVER**  
*Gavia stellata*: is one of the smallest diver birds with a length of 55cm. It over-winters from the UK to the north coast of Africa and breeds in Western Europe.<sup>1</sup> The outer Thames provides important habitat and prey for this species and is one of the main reasons that the outer Thames is a Special Protected Area.<sup>12</sup>

**HARBOUR PORPOISE**  
The harbour porpoise, *Phocoena phocoena*, has a rounded head with no apparent beak and a short, triangular dorsal fin. It usually travels in schools which can be composed of up to sixteen or more individuals. They migrate between colder and warmer water depending on the season but are usually found in estuaries and relatively shallow water (less than 200m).

**EUROPEAN EEL**  
The eel, *Anguilla anguilla*, has a long worm-like body with a projecting jaw. It has a fascinating life cycle, breeding in the Sargasso Sea and the larvae then spend three years drifting in the Gulf Stream. Its European range extends throughout the Mediterranean and from Northern Norway and Iceland South to Morocco. In spring eelers (young eels) migrate up the Thames and other estuaries to mature upstream in lakes, rivers and ponds.

- KEY:**
- CONSERVATION AREA PROTECTED UNDER VARIOUS DESIGNATIONS
  - SPECIAL PROTECTION AREA
  - SPECIAL AREA OF CONSERVATION
  - NATIONAL NATURE RESERVE
  - PORT OF LONDON AUTHORITY JURISDICTION LIMITS
  - NON DESIGNATED WATER
  - SPECIES/HABITAT OF INTERNATIONAL CONSERVATION CONCERN
  - SPECIES/HABITAT OF EUROPEAN CONSERVATION CONCERN
  - SPECIES/HABITAT OF NATIONAL CONSERVATION CONCERN
  - URBAN AREA
  - RURAL AREA

1. Flegg, J., 1990. Jim Flegg's Field Guide to the Birds of Britain and Europe. London, New Holland (Publishers Ltd).
2. Thames Estuary Partnership, 2004. Habitat & Species Audit. Thames Estuary Partnership.
3. Huischer, J. B., 1984. Growth and Abrasion of the Oystercatcher Bill in Relation to Dietary Swatches. Netherlands Journal of Zoology, 35 (1-2), pp.24-54.
4. Newell, R., Measures, J., 2010. London Gateway Port & The Marine Environment. DP World, London Gateway. Faversham, Frank Haccis Associates.
5. London Biodiversity Partnership, 2004. Water vole Species Action Plan. London Biodiversity Partnership.
6. Beer, A., Hall, D., 2007. The Illustrated World Encyclopedia of Marine Fish & Sea Creatures. London, Anness Publishing Ltd.
7. Bataillat, N., Henttonen, H., Meinig, H., Shenbrat, G., Bulkinastvill, A., Amort, G., Hurner, R., Krytsek, B., Yigit, N., Mitsain, G., Muffoz, L. J. P., 2008. Arvicola amphibius. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.1.
8. Garard, I., Smeeter, D., 1983. The Wild Flowers of the British Isles. London and Basingstoke, Macmillan London Ltd.
9. Durham, J., Bullock, R., Hunter, T., 2007. Reedbed Conservation in London. London Biodiversity Partnership.
10. Wheeler, A., 1979. The Tidal Thames, The history of a river and its fishes. London, Routledge & Kegan Ltd.
11. Frophof, J., Kottlat, M., 2008. Anguilla anguilla. In: IUCN 2011. IUCN Red List of Threatened Species. Version 2011.1.
12. Natural England, 2010. Evidence base for designation of the Outer Thames Estuary Special Protection Area. Outer Thames Estuary SPA IRL IA. Natural England.
13. David Morrison, urban peregrine consultant, London Peregrines.
14. Dyer, M., Worsfold, T., Lys, S., 2010. Proposed Greenlithe Marine Environment Report Aquatic Biological Surveys (Part 1: Main Report) For Greenlithe Marina (Management) LLP. Thomson Ecology Ltd.
15. Chaut, A., Bayed, A., 2006. First record of Alkmaria romijni Horst, 1919 (Polychaeta: Ampharetidae) from the Mediterranean coast (Smir Lagoon, Morocco). Marine Life, 16, pp.15-19.
16. Wheeler, A., Newman, C., 1997. The Pocket Guide to Saltwater Fishes of Britain and Europe. London, Parkgate Books Ltd.
17. Environment Agency. Fish found in the tidal Thames. GeTI1005DJ0Y-E-P.
18. www.zsl.org/conservation/regions/uk-europe/thames-estuary/seas-in-the-thames,1586.AR.html

FOR MORE INFORMATION VISIT: [WWW.PLA.CO.UK](http://WWW.PLA.CO.UK)  
 email: [environment@pla.co.uk](mailto:environment@pla.co.uk) @LondonPortAuth