Examination Information

i **d** e n t i f i c a t i o n **q** u a l i f i c a t i o n s

NAME OF UNIT: **NORTHEAST ATLANTIC MARINE FISHES**

REFERENCE NUMBER: **Z072**

COST OF EXAMINATION: **£ 250.00**

SYNOPSIS:

The aim of this examination is to test the application of skills in identifying marine fishes from the seas and estuaries around the British Isles. The level of difficulty has been matched to the quality standards required for identifying biological material in resource assessments, environmental impact studies, habitat evaluations or other biological and ecological surveys.

Candidates will be expected to demonstrate proficiency in identifying marine fishes to family, genus or species level as required. A full list of families and genera covered by this Unit is given in the attached Appendix. Both adult and juvenile stages may be included. Most of the examination material will be in the form of preserved specimens (entire or as isolated parts such as scales or otoliths), but may also include photographs and line drawings.

A time element has also been taken into account so that the examination is a realistic test of efficiency of practical work as well as accuracy of identification. There is no restriction on the use of keys, handbooks or other identification manuals.

Candidates will also be expected to demonstrate an understanding of relevant morphological terms, especially those that are used as diagnostic or key characters; familiarity with identification manuals, checklists and other relevant publications; and a basic working knowledge of zoological nomenclature as it relates to the correct use of taxonomic names.

CANDIDATE GROUPS:

Biologists and ecologists working for the Environment Agency, Scottish Environmental Protection Agency, and Water Companies, or elsewhere in the water industry; fisheries biologists, marine ecologists, environmentalists and taxonomists engaged in assessing, monitoring or evaluating fish stocks or marine habitats; also experienced amateurs.

EXAMINATION FORMAT:

The examination comprises a practical test lasting about two and a half hours, and a short written paper of about half an hour - total duration 3 hours.

The main practical test will be in two parts: the first lasting about half an hour will involve the identification of about 20 specimens to species level, or to other higher taxonomic group as required. In the time allocated this material will have to be identified mainly 'by eye' and without the use of keys. The second part (2 hours) will comprise identification of about 20 specimens to species, for which full use of keys will be essential. Some specimens which cannot be keyed out may also be included; candidates will be expected to state if it is impossible to identify these, and any guesses at inappropriate levels of accuracy will be regarded as incorrect answers.

The written paper will consist of 5-10 multiple-choice questions on morphology, structure of keys, relevant publications, and the correct use of scientific names.

EQUIPMENT:

Candidates are encouraged to bring their own microscopes but where this is not possible a dissecting microscope (x 50) and lamp will be provided for each candidate, and one or more shared compound microscopes will be on hand. Standard items such as forceps, mounted needles, slides and cavity blocks will be provided. Facilities for making temporary slide mounts will be available, although dissections will not generally be necessary.

Candidates will be expected to bring their own identification keys, handbooks, and other identification aids, although single copies of relevant key works will be provided. Reference collections will not be available, nor can they be brought into the examination by candidates. Any problems over the availability of equipment and literature should be referred to the Museum well in advance of the examination date.

MARKING:

The pass mark for the examination is 90 per cent. Candidates achieving the pass mark will receive the full IdQ Certificate. As well as being informed in writing of their result, each candidate will also be given the actual percentage mark achieved.

To encourage training in marine fish identification and the progressive acquisition of skills, candidates who fail to achieve the 90 per cent pass but who reach the intermediate standard of 70 per cent will be awarded an Intermediate Certificate.

VENUE:

The examination will be held at the Natural History Museum, South Kensington, London.

BOOKING INFORMATION:

For details on how to book and download an application form go to www.nhm.ac.uk/science/idq or contact idq@nhm.ac.uk, telephone (020) 7942 5816 or fax (020) 7942 5841.

REFERENCE LIST:

Knowledge of the following works will generally be essential for successful completion of the examination, but in some cases candidates may prefer to use alternatives. The list is intended as a guide only.

Nelson, J.S. 1984. *Fishes of the World.* Second Edition. John Wiley & Sons, New York, Chichester, Brisbane, Toronto and Singapore.

Wheeler, A.C. 1969. *The fishes of the British Isles and North-West Europe.* MacMillan & Co Ltd, London.

Whitehead, P., Bauchot, M-L., Hureau, J.C., Nielsen, J. & Tortonese, E. (Ed.). 1984-1988. *Fishes of the north-eastern Atlantic and the Mediterranean*. 3 vols. UNESCO, Paris.

Greenwood, P.H., Rosen, D.E., Weitzman, S.H. & Myers, G.S. 1966. Phyletic studies of teleostean fishes, with a provisional classification of living forms. *Bulletin of the American Museum of Natural History* **131**(4): 339-456.

APPENDIX: List of Genera covered by IdQ

Myxinidae
Myxine Linnaeus
Petromyzonidae
Petromyzon Linnaeus

Scyliorhinidae
Scyliorhinus Blainville
Galeus Cuvier
Triakidae
Mustelus Cuvier

Squatinidae
Squatina Duméril

Rajidae
Raja Linnaeus

Dasyatidae
Dasyatis Rafinesque

Chimaeridae
Chimaera Linnaeus
Acipenseridae
Acipenser Linnaeus

Clupeidae
Engraulis Cuvier
Alosa Linck
Sardina Antipa
Sprattus Girgensohn
Clupea Linnaeus

Argentinidae
Argentina Linnaeus

Salmonidae
Osmerus Linnaeus

Congridae
Conger Oken

Belonidae
Belone Cuvier
Scomberesocidae
Scomberesox Lacepède

Exocoetidae
Exocoetus Linnaeus
Cypselurus Swainson

Syngnathidae
Syngnathus Linnaeus
Entelurus Duméril
Nerophis Rafinesque

Gadidae
Merlangius Geoffroy St. Hilaire
Trisopterus Rafinesque
Gadiculus Guichenot
Pollachius Nilsson
Gadus Linnaeus
Melanogrammus Gill
Merluccius Rafinesque
Molva Lesueur
Ciliata Couch
Gaidropsarus Rafinesque

Zeidae
Zeus Linnaeus

Serranidae
Dicentrarchus Gill
Polyprion Oken

Carangidae
Trachurus Rafinesque

Sciaenidae
Argyrosomus De la Pylaie
Umbrina Cuvier

Mullidae
Mullus Linnaeus

Sparidae
Pagellus Valenciennes
Sparus Linnaeus
Pagrus Cuvier
Spondyliosoma Cantor
Dentex Cuvier

Cepolidae
Cepola Linnaeus

Labridae
Coris Lacepède
Crenilabrus Oken
Labrus Linnaeus

Ammodytidae
Ammodytes Linnaeus
Gymnammodytes Duncker & Mohr
Hyperoplus Gunther

Trachinidae
Trachinus Linnaeus

Scombridae
Scomber Linnaeus
Auxis Cuvier
Sarda Cuvier
Katsuwonus Kishinouye
Thunnus South

Gobiidae
Gobius Linnaeus
Pomatoschistus Gill
Aphia Risso

Callionymidae
Callionymus Linnaeus

Blenniidae
Blennius Linnaeus

Pholidae
Pholis Scopoli (ex Gronow)

Zoarcidae
Zoarces Cuvier
Lycenchelys Gill

Anarhichadidae
Anarhichas Linnaeus

Mugilidae
Mugil Linnaeus
Crenimugil Schultz
Liza Jordan & Swain

Atherinidae
Atherina Linnaeus

Scorpaenidae
Helicolenus Goode & Bean
Scorpaena Linnaeus
Sebastes Cuvier

Triglidae
Eutrigla Fraser-Brunner
Aspitrigla Fowler
Trigla Linnaeus
Peristedion Lacepède

Cottidae
Myoxocephalus Tilesius
Taurulus Gracianov

Agonidae
Agonus Bloch & Schneider

Cyclopteridae
Cyclopterus Linnaeus

Liparidae
Liparis Scopoli (ex Artedi)

Gasterosteidae
Spinachia Fleming

Bothidae
Scophthalmus Rafinesque
Lepidorhombus Gunther
Arnoglossus Bleeker

Pleuronectidae
Pleuronectes Linnaeus
Platichthys Girard
Limanda Gottsche
Hippoglossus Cuvier
Microstomus Gottsche
Reinhardtius Gill
Glyptocephalus Gottsche

Soleidae
Solea Rafinesque
Microchirus Bonaparte

Gobiesocidae
Lepadogaster Gouan