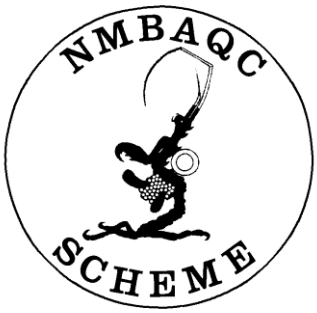

BEQUALM
NATIONAL MARINE BIOLOGICAL ANALYTICAL QUALITY CONTROL SCHEME
Annual Report - Year 16 - 2009/2010

A report prepared by the NMBAQC Coordinating Committee – August 2012

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This Year 16 Annual Report provides synopsis of the scheme year's activities over 2009/2010. Detailed information about each of the scheme components is now available as separate reports or bulletins on the scheme's website. The relevant documents are all cited here and the reader is directed via hyperlinks to the NMBAQC website as appropriate.

The NMBAQC coordinating committee held three meetings during the scheme Year 16 on 16th June 2009, 8th October 2009 and 19th January 2010. The minutes from these committee meetings are now available on the NMBAQC website.

Committee Membership for Year 16 is shown in Appendix 1.

1 Scheme Review

The scope of the NMBAQC scheme continued to develop in Year 15 to encompass the requirement to provide quality assurance for assessments under the Water Framework Directive (WFD), for which monitoring commenced in the UK in 2007. The scheme still maintains its role to provide Analytical Quality Control for Invertebrate and Particle Size data collected for UK CSEMP (Clean Seas Environment Monitoring Programme – formerly the NMMP). Under the UK Marine Monitoring and Assessment Strategy (UKMMAS) the NMBAQC coordinating committee now reports to the Healthy and Biologically Diverse Seas Evidence Group HBDSEG. In Yr 16 the NMBAQC agreed their Terms of Reference with HBDSEG.

Year 16 of the scheme involved training and testing exercises for the Invertebrate, Particle Size and Phytoplankton components as have been run in previous years. This year the annual Invertebrate component workshop involved a four-day beginner's taxonomic workshop at the Unicomarine Laboratory in Letchworth. New items of work for the NMBAQC in Year 16 involved: a Fish reverse ring test; a Fish taxonomic workshop; and, a workshop to discuss the outcomes of the trial video ring test for the Epibiota component.

In Year 16 work was completed on the update of the 1978 'Key to the fishes of Northern Europe' by Alwyne Wheeler. This seminal field key for fish biologists was updated by Peter Maitland (Fish Conservation Centre, Scotland) and Douglas Herdson (Marine Fish Information Services, Devon) and was edited by Steve Coates (Environment Agency). Further information can be found on the NMBAQC website.

The NMBAQC also produced a new webpage which introduces a Quality Assurance system for marine biological monitoring, and includes a paper outlining the QA system that all agencies, their contractors, partners and data providers are expected to adhere to (for European directives: WFD, MSFD and OSPAR).

This year the participation level in the NMBAQC grew compared to Yr 15 (33 participants), with a total of 58 organisations involved in it's training and testing exercises (see Appendix 2).

Summaries of all the component activities are provided below:

1.1 Invertebrate component

Contract Manager: Myles O' Reilly, SEPA

Component Administrator: David Hall, Thomson Unicomarine Ltd

1.1.1 Summary of activities

The sixteenth year of the Scheme (2009/10) involved a series of four modules under the Invertebrate component:

- Invertebrate Ring Test identification (RT37 and RT38) training exercise.
  Two sets of twenty-five specimens of benthic invertebrates (RT37 general invertebrate ring test, RT 38 'Targeted Beginners' Training Pack specimens', taxa without errors from previous ring tests) supplied for identification by participating laboratories.

- Macrobenthic invertebrate sample analysis (MB17; artificial estuarine samples) training exercise.
  One macrobenthic sample, supplied by the contractor, for full laboratory processing (extraction, enumeration and biomass).

- Laboratory Reference (LR14) training exercise.
  Participating laboratories submitted twenty-five benthic invertebrate specimens for re-examination by the contractor. The specimens could be either voucher material from their reference collection for confirmation or difficult/problematic taxa about which they are unsure).

- Own Sample (OS41, OS42 and OS43) reanalysis testing exercise, with pass/fail flag for Clean Seas Environment Monitoring Programme (CSEMP, formerly UK NMMP laboratories).
  Participating laboratories were requested to send the contractor their benthic invertebrate data matrices from which three samples were selected. The three chosen samples were submitted and were reanalysed by the contractor. Each 'Own Sample' was assessed on the efficiency of extraction, identification, enumeration and biomass.

An Invertebrate Taxonomic Workshop was held at the Unicomarine Laboratory in Letchworth in November 2009. This workshop was tailored for beginners, and included an introduction to key features and terminology used for many Invertebrate Phyla, with practical sessions focusing on the Phyla: Annelida, Mollusca, Crustacea and Echinodermata. Please see Appendix 3 (page 12 of this report) for the workshop timetable.

1.1.2 Summary of exercise results

Thirty-eight laboratories participated in the benthic invertebrate component of the NMBAQC Scheme in Yr 16 (see Appendix 2). Fifteen participants were government laboratories; twenty-three were private consultancies. Thirteen of the participants were responsible for CSEMP (Clean Seas Environment Monitoring Programme) sample analysis (excluding subcontracted samples). A summary of the overall NMBAQC participation levels is shown in Appendix 2 (page 10 of this report).

The results of the Own Sample (OS41, OS42 and OS43) reanalysis testing exercise were generally consistent with the results from Yr 13 OS exercise. The Bray-Curtis similarity index (between the participating laboratory and the contractor) was greater than 95% (Pass flag) 60% of samples and in most cases (81%) the value of the index was greater than 90%, these samples all achieved 'pass' flags. All the laboratories with 'Poor' or 'Bad' sample flags for CSEMP samples addressed their 'failing' samples by undertaking remedial action. However, one of the four laboratories with 'Poor' or 'Bad' sample flags for CSEMP samples and seven of the fourteen laboratories with 'Poor' or 'Bad' sample flags for Non-CSEMP samples did not confirm whether remedial action was completed, therefore are given a 'status unknown' flag.

A summary of CSEMP samples submitted by UK Competent Monitoring Authorities (CMAs) for CSEMP sampling years 1999 to 2008 is now available on the scheme website.

Of the training exercises, the Macrobenthic exercise MB17 posed similar problems to previous MB tests: some problems associated with sample processing methods (faunal extraction and identification of the taxa). The ring test RT37 had fairly good agreement between the identifications made by the participating laboratories and those made by Unicomarine Ltd. The majority of the generic errors can be attributed to *Tharyx* sp., *Desdemona ornata*, *Eusarsiella zostericola*, *Chaetozone gibber*, *Pterolysippe vanelli*, *Yoldiella philippiana*, *Pholoe assimilis* and *Caulleriella alata*. Further details on RT37 can be found in the Ring Test Bulletin (RTB#37). The 'targeted' ring test (RT38 – 'Beginners' Training Pack') had fairly good agreement between the identifications made by the participating laboratories and those made by Unicomarine Ltd. The bulk of errors recorded can be attributed to six specimens: *Heterochaeta costata*, *Spio martinensis*, *Lagis coreni*, *Magelona alleni*, *Pseudoprotella phasma* and *Crepidula fornicata*. Further details on RT38 can be found in the Ring Test Bulletin (RTB#38). The Laboratory Reference (LR) exercise did not reveal any clear problem areas, however there were differences in the approach to this exercise by the individual laboratories (some laboratories used this to confirm voucher specimens whilst others sought a means of having 'unknowns' identified).

More detailed information on these exercises can be found in the contractors report below. Among the recommendations highlighted by the contractor is the need for NMBAQC to develop standard protocols detailing the processing requirements for macrobenthic invertebrate samples and for participants to utilise the NMBAQC's UK Standard Taxonomic Literature List database to minimise the differences in literature used for identification of invertebrates.

Invertebrate component Annual Report:
Hall, D.J., 2011 Benthic Invertebrate Component - Report from the Contractor. Scheme Operation – Year 16 – 2009/10. A report to the NMBAQC Scheme participants. 23pp, June 2010.

Yr 16 Own Sample Report:
Own Sample Module Summary Report OS41, 42 & 43 - February 2011
Hall, D.J., 2011. National Marine Biological Analytical Quality Control Scheme. Own Sample Module Summary Report OS41, 42 & 43. Report to the NMBAQC Scheme participants. 24pp, February 2011.

Yr 16 Ring Test Bulletins

RTB 38 - April 2010

Hall, D.J. and Taylor, J.G., 2010. National Marine Biological Analytical Quality Control Scheme. Ring Test Bulletin: RTB#38. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrtb#38, 30pp, April 2010.

RTB 37 - December 2009

Hall, D.J. and Worsfold, T.M., 2009. National Marine Biological Analytical Quality Control Scheme. Ring Test Bulletin: RTB#37. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrtb#37, 37pp, December 2009.

Yr 16 Macrobenthic Exercise Report

MB 17 - April 2010

Hall, D.J. and Taylor, J.G., 2010. National Marine Biological Analytical Quality Control Scheme. Macrobenthic Exercise Results - MB17. Report to the NMBAQC Scheme participants. 23pp, April 2010.

1.1.3 Taxonomic literature

The following taxonomic key was produced through the NMBAQC in Yr 16:

Cirratulid compilation, 2009

Worsfold, T.M., 2009. Progress on the identification of Cirratulidae in British and Irish waters through the NMBAQC Scheme: 1996-2009. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCcir09, 114pp, July 2009.

1.2 Particle Size Analysis component

Contract Manager: Myles O' Reilly, SEPA
Component Administrator: David Hall, Thomson Unicomarine Ltd

1.2.1 Summary of activities

The sixteenth year of the Scheme (2009/10) involved one module under the Particle Size Analysis component:

- Particle Size Analysis (PS34 and PS35) testing exercise, with pass/fail flag for UK CSEMP (NMMP) laboratories.
  Two marine sediment samples (one coarse the other much finer) supplied to participating laboratories for Particle Size Analysis.

Following an initial assessment of current PSA methods used by UK labs, a workshop was held at Cefas, Lowestoft in February 2009 for the NMBAQC Particle Size participating laboratories to discuss 'best practice' methods which should be included in a UK wide SOP. The Proceedings and supporting documents from this workshop are

available on the NMBAQC's PSA Workshops page. Following this workshop Claire Mason (Cefas) began drafting a best practice guidance document for 'PSA for Supporting Biological Analysis' which was completed in November 2011.

1.2.2 Summary of results

Twelve laboratories participated in the particle size analysis component of the NMBAQC Scheme (see Appendix 2). Six laboratories were government laboratories; six were private consultancies. Half of the participants (6) were responsible for CSEMP (Clean Seas Environment Monitoring Programme) sample analysis. A summary of the overall NMBAQC participation levels is shown in Appendix 2.

The Particle Size testing exercise, PS34 (sandy mud sample) resulted in five 'fail' and fifty 'pass' flags; two of these fails were the result of transcription/spreadsheet errors. PS35 (slightly gravelly muddy sand sample) resulted in ten 'fail' and forty-five 'pass' flags; six of these fails, produced by three of the five participants that did not record a gravel component in their results.

More detailed information on this exercise can be found in the contractors report below. Among the recommendations highlighted by the contractor is the need for the participating laboratories to clearly describe the method of analysis and equipment used. The new NMBAQC's Best Practice Guide should be used from now on.

Particle Size component Annual Report:
Hall, D.J., 2010. Particle Size component - Report from the contractor. Scheme Operation–Year 16 – 2009/10.

Best Practice Guidance for Particle Size Analysis
Mason, C., 2011. NMBAQC's Best Practice Guidance for Particle Size Analysis (PSA) for supporting biological analysis.

Particle Size Reports:
PS35 - February 2010
Hall, D.J., 2010. National Marine Biological Analytical Quality Control Scheme. Particle Size Results: PS35. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCps35, 20pp, February 2010.

PS34 - October 2009
Hall, D.J., 2009. National Marine Biological Analytical Quality Control Scheme. Particle Size Results: PS34. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCps34, 19pp, October 2009.

1.3 Fish component

Contract Manager: Steve Coates, Environment Agency
Component Administrator: David Hall, Thomson Unicomarine Ltd

The sixteenth year of the Scheme (2009/10) involved the first official Fish Reverse Ring Test. Twenty laboratories participated in the fish component in year 16 of which 19 were government laboratories and one a private consultancy. Two of the government

laboratories combined their final entry. The component consisted of one module with a single exercise: re-identification of a set of fifteen fish specimens supplied by each of the participating laboratories (Fish Reverse Ring Test module). One potential problem highlighted within the Fish Reverse Ring Test was the identification of Lesser pipefish *Syngnathus rostellatus* with over half the submissions of this taxon incorrectly identified. Other recurring errors were noted for Gobies (several species), Bull-rout and Lesser sandeels. However, there were differences in the approach to this exercise by the individual laboratories; some laboratories used this as a test for confirming voucher specimens whilst others sought a means of having uncertain or 'unknowns' identified making it difficult to directly compare results.

Among the recommendations highlighted by the contractor is the need for the participants to inform Unicomarine of difficult taxa that they would like to be 'Ring Tested'. Participants are also invited to submit specimens for use in such exercises (approximately 20 specimens of equal size and condition would be required for inclusion).

A fish taxonomic workshop was held at University Marine Biological Station Millport, Scotland in April 2009. This workshop included work on general identification methods of marine and estuarine fish, with two key identification experts, Peter Henderson and Peter Miller. This was a trial workshop for Competent Monitoring Authority staff which received very positive feedback, therefore the NMBAQC plans to repeat workshop in a similar format which will be open to all NMBAQC participants in 2011.

More detailed information on this exercise and the workshop can be found in the contractor's report below.

Fish component Annual Report:
Hall, D.J., Taylor J.G., 2010 Fish component - Report from the contractor. Scheme Operation – Year 16 – 2009/10. A report to the NMBAQC Scheme participants. 9pp, August 2010.

Reverse Fish Ring Test Bulletin:
RRT 01- December 2009
Taylor, J. and Hall, D.J, 2009. National Marine Biological Analytical Quality Control Scheme. Reverse Fish Ring Test Bulletin: RRT01. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrrt01, 22pp, December 2009.

1.4 Phytoplankton component

Scheme Administrator: Joe Silke, Marine Institute, Galway, Ireland. Registration and fee collecting arranged through BEQUALM Website (based at CEFAS Lab, Lowestoft).

1.4.1 Summary of activities

The Phytoplankton inter-comparison exercise comprised of two exercises (enumeration and identification) and one workshop:

- Enumeration of cells exercise: In 2009, six seawater samples spiked with live phytoplankton culture preserved in Lugol's iodine. The 6 samples were triplicates of low cell density aliquots and high cell density aliquots. Preliminary cell counts for each cell density were carried out using a Sedgewick-Rafter cell counting chamber to ascertain the approximate densities in the samples. The 1ml aliquots at low cell concentrations contained 200 cells approximately and the high cell concentration 10000 cells (hypothesised values based on 10 replicate counts).

- Identification exercise: custom-made from 'scratch' and comprises 8 questions and 300 marks. The exercise uses photographs and line drawings of marine phytoplankton species. The exercise is biased towards Diatoms, Dinoflagellates and toxic/harmful phytoplankton species.

- Taxonomic quiz: a repeat of the exercise from 2008.

- Workshop: the BEQUALM workshop was held on the 16th of April 2009 at the Marine Institute, Galway, Ireland. The statistical analysis of the results was made by John Newell of the Biostatistics Unit of the National University of Ireland, Galway. Presentations were by the guest speaker Dr. Urban Tillman, Alfred Wegener Institute, Germany, on *Azadinium spinosum* and protistan grazing. Josephine Lyons of the Marine Institute Phytoplankton unit gave a talk on accreditation in the phytoplankton lab.

1.4.2 Summary of results

A total of 34 analysts from 17 laboratories (from the UK, Ireland, Holland, Germany and Spain) participated in the Phytoplankton enumeration and identification ring test in year 16 (see Appendix 2).

The identification exercise showed good repeatability between participants, the Galway laboratory and the 'Galway Gold Standard'. Most analysts exceeded the 70% overall pass mark. Seven analysts performed above 90%, 15 analysts between 80 and 90%, 11 analysts between 70 and 80% and 1 analyst below the pass mark. In the enumeration exercise, most labs underestimated the count for *Prorocentrum micans*. Although most analysts performed well, there was overall evidence of lack of reproducibility within and between labs. But overall, the standard of the enumeration and identification exercise was very high.

More detailed information on this exercise can be found in the following contractor report:

Phytoplankton Enumeration and Identification Ring Test

Salas, R.G., 2009. Phytoplankton enumeration and identification analysis. Ring Test PHY-ICN-09-MI1 Exercise Report. 86pp.

1.5 Epibiota component

Contract Manager: Matt Service, AFBI
Component Administrator: Ian Sotheran, Envision

1.5.1 Summary of activities

The Epibiota trial video ring test, which involved three separate ring tests run in Year 15 was concluded in Year 16 with a two day workshop which was held at the Centre for Life, Newcastle upon Tyne in May 2009.

1.5.2 Summary of results

The Epibiota trial video ring test identified several issues which were discussed at the final workshop. Issues generally involved participants identifying biota to different taxonomic levels, and there were substantial discrepancies between counts and percentage cover estimates particularly when there were high numbers of biota. There was also substantial variation between participants interpretation of substrates (e.g. between coarse sand and gravels). There were also issues with the variable level of expertise of participants and the variable analysis methods used by participants. Finally, the marking scheme of the ring tests had some drawbacks, and future marking schemes will require the development of Pass/Fail criteria.

The workshop proceedings and detailed results and recommendations from the Epibiota trial video ring test can be found in the Epibiota Trial Video Ring Test Reports (2007-2009).

1.5.3 Taxonomic literature

A summary of taxonomic literature relevant to the identification subtidal epibiota was compiled for the Epibiota trial video ring test and is now available on the NMBAQC website.

Appendix 1 - NMBAQC Co-ordinating Committee – Year 16 - 2009/2010

Name	Organisation	Position
Tim Mackie	Environment & Heritage Service, NI	Chair
Amanda Prior	Environment Agency	Finance Manager
Prue Addison	Environment Agency / Joint Nature Conservation Committee	Secretary
Myles O'Reilly	Scottish Environment Protection Agency	Invertebrate Contract Manager
Steve Coates	Environment Agency	Fish Contract Manager
Joe Silke	Marine Institute, Ireland	Phytoplankton Contract Manager
Clare Scanlan	Scottish Environment Protection Agency	Macroalgae Contract Manager
Carol Milner	APEM Ltd	Contractors Representative
Lucie Oliver	Countryside Council for Wales / Environment Agency	CMA Representative
Matt Service	Agri-Food and Biosciences Institute, NI	CMA Representative
Keith Cooper	Centre for Environment, Fisheries & Aquaculture Science	CMA Representative
Mike Robertson	Fisheries Research Services, Aberdeen	CMA Representative
David Hall	Thomson Unicomarine Ltd	Invertebrate, Particle Size and Fish Components Administrator

Appendix 2 - NMBAQC scheme participation for Year 16

	ORGANISATION	Invertebrate	PSA	Fish	Epibiota	Phytoplankton
1	Agri-Food and Biosciences Institute	✓	✓	✓	✓	✓
2	AMSL				✓	
3	APEM Ltd	✓	·	✓		
4	AWI/BAH, Germany					✓
5	Benthic Solutions Ltd	✓	✓			
6	Biotikos	✓	·			
7	Centre for Environment, Fisheries & Aquaculture Science	✓	✓		✓	✓
8	CMACS Ltd	✓	✓		✓	
9	Countryside Council for Wales	✓	·		✓	
10	Ecospan Environmental Ltd	✓	·			
11	EMU Ltd.	✓	✓		✓	
12	Environment Agency	✓	✓	✓		
13	Envision				Contract Administrator	
14	Fisheries Research Services, Marine Laboratory					✓
15	Fish Vet Group	✓	·			
16	Fugro	✓	·		✓	
17	FRS					✓
18	Gardline Environmental	✓	✓		✓	
19	Grontmij / AquaSense	✓	·			
20	Hebog Environmental Ltd	✓	·			
21	Herriot Watt				✓	
22	Hunter Biological	✓	·			
23	Institute of Estuarine and Coastal Studies, University of Hull	✓	✓			
24	INTECMAR					✓
25	IRTA					✓
	Isle of Man Government Laboratory					✓
26	Jacobs Engineering UK Ltd	✓	·			✓
27	Joint Nature Conservation Committee	Info Only			✓	
28	Koeman en Bijkerk bv, The Netherlands					✓
29	LCCRRPP					✓
30	LVCC Palmones. Egmasa, Spain	✓	·			
31	Marine Bio Images				✓	
32	Marine Ecological Solutions Ltd.				✓	
33	Marine Ecological Surveys Ltd.	✓	·		✓	

34	**Marine Farm Services, Shetland Seafood Quality Council (SSQC)**	✓	·			
35	**Marine Institute, Ireland**					✓
36	**Marine Scotland - Science (formerly Fisheries Research Services)**	✓	✓		✓	
37	**Marine Phytoplankton Ecologist**					✓
38	**National University of Ireland (Martin Ryan Marine Science Institute - Benthic Ecology Unit)**	✓	·			
39	**Natural England**				✓	
40	**Netherlands Institute of Ecology**	✓	·			
41	**Northern Ireland Environment Agency**	✓	✓	✓	✓	✓
42	**Pelagial**				✓	
43	**Precision Marine Survey Ltd**	✓	·			
44	**Royal Haskoning**				✓	
45	**RPS Planning and Development Ltd**				✓	
46	**SAHFOS**					✓
47	**Scottish Association of Marine Science**					✓
48	**Scottish Natural Heritage**	Info Only			✓	
49	**Scottish Environment Protection Agency**	✓	✓	✓		
50	**The Water Management Unit**					✓
51	**Unicomarine Ltd**	Contract Administrator	Contract Administrator	Contract Administrator	✓	
52	**University of Plymouth**				✓	
53	**University of St Andrews (SERG:ES)**	✓	·			
54	**University of Stirling**	✓	·			

Appendix 3 - BEQUALM/NMBAQC Scheme Taxonomic Workshop November 2009

BEQUALM / NMBAQC Scheme Taxonomic Workshop for Beginners 9th-13th November 2009 (Unicomarine Ltd., Letchworth Laboratory).

Day	Session	Discussion / Demonstration / Practical	Aims	Session Leader
Monday 9th Nov. 2009	1:00pm	Arrival. Laboratory set-up.	Prepare laboratory equipment for practical sessions.	David Hall
	1:30pm	Introduction. General information. Lab. rules (H&S issues). Q&A session.	Welcome participants. Outline folder / timetable / daily structure. Give history of Unicomarine and facilities. Present pub & food guide.	Martin Dyer & David Hall
	2:00pm	Demonstration / Discussion - Sample Processing.	Requirements, SOP's and best practice for sample analysis.	David Hall
	2:20pm	Practical - Phyla recognition.	Review starting position of knowledge.	David Hall
	pm	Demonstration - Porifera, Cnidaria, Platyhelminthes, Nematoda, Nemertea, Priapulida, Sipuncula & Echiura.	Introduce the major features / terminology used for these Phyla. Show major literature required for identification.	David Hall
	pm	Practical – Examination of reference material.	Obtain familiarity with the major identification features. Gain experience of identification.	David Hall
Tuesday 10th Nov. 2009	9:15am	Demonstration - Annelida.	Introduce the major features / terminology used for this Phylum. Show major literature required for identification.	David Hall
	pm	Practical – Examination of reference material.	Obtain familiarity with the major identification features. Gain experience of identification.	David Hall
	4:30pm	Practical – test specimens.	Allow identification of unnamed material.	David Hall
Wednesday 11th Nov. 2009	9:15am	Demonstration - Mollusca.	Introduce the major features / terminology used for this Phylum. Show major literature required for identification.	Tim Worsfold
	pm	Practical – Examination of reference material.	Obtain familiarity with the major identification features. Gain experience of identification.	Tim Worsfold
	4:30pm	Practical – test specimens.	Allow identification of unnamed material.	Tim Worsfold
Thursday 12th Nov. 2009	9:15am	Demonstration - Crustacea.	Introduce the major features / terminology used for this Phylum. Show major literature required for identification.	Chris Ashelby
	pm	Practical – Examination of reference material.	Obtain familiarity with the major identification features. Gain experience of identification.	Chris Ashelby
	4:30pm	Practical – test specimens.	Allow identification of unnamed material.	Chris Ashelby
Friday 13th Nov. 2009	9:15am	Demonstration – Echinodermata.	Introduce the major features / terminology used for this Phylum. Show major literature required for identification.	David Hall
	am	Practical – Examination of reference material.	Obtain familiarity with the major identification features. Gain experience of identification.	David Hall
	pm	Discussion - Summary of week. Q&A session. Departure.	Distribute / collect workshop feedback forms.	David Hall