Write right - Putting geodiversity into words

Conference Summary

Saturday 22 November 2014 - A one-day conference organised by the Scottish Geodiversity Forum and the School of Geosciences, University of Edinburgh

In leaflets, museums, websites, blogs and interpretation boards, Scotland's geodiversity is being written about for a range of audiences. This conference is for anyone interested in writing about our geodiversity. It will encourage sharing of experiences, inspire new insights and work towards top-quality writing that informs, interprets and inspires. The conference will create and publish best practice guidance and appropriate examples to aid anyone writing about Scotland's geodiversity in the future.

Keynote presentation

New Stories from the Stones: make geodiversity rock the pages - **Kenny Taylor**

For communication to a wide audience

- shun jargon
- embrace your own senses, including a sense of enthusiasm for geology and the excitement of scientific inquiry – past, present and potential future

What do you like (do you really, *really* like) in different media, work, experiences: music, art, literature, food, geology?

Does that inform how you communicate?

If not, why not?

How widely do you read non-geology texts e.g. contemporary fiction, classic novels, newspaper features?

Your own passion for a subject (without gushing) can be part of communicating its pleasures.

We're used to recognising passion in media with strong audio-visual content e.g. blue-chip TV series, theatre drama, films

So what about words in print?

- Features, books, papers and more…
- Including blogs, websites, tweets

Think back, way, way back……

The storyteller is at the fireside

And there are many ways of telling stories

- Including stories you've heard before

So there are many stories that can be re-told in new ways

And there are many exciting developments in geology and wider science whose story has yet to be shared with a broad reader/viewer/listenership.

What is *your* voice?

- How will you have a conversation in it?
- Who is your audience?
- What is your medium?
- What's the hook for the story?

Research as a story

- Your own work
- Historical developments
- Contemporary breakthroughs

Fieldwork

- *Feel*d work
- How does it feel?
- Sensory
- Emotional (tiredness, confusion, perspiration, elation, inspiration)

Findings

- Core message
- Why is this important?
- Why it's fun

The power of a good opener
'It was a bright cold day in April, and the clocks were striking thirteen.'
George Orwell: Nineteen Eighty-Four (1949)

"All children, except one, grow up."
J.M. Barrie: Peter Pan (1911)

"It was inevitable: the scent of bitter almonds always reminded him of the fate of unrequited love."
Gabriel Garcia Marquez: Love in the Time of Cholera (1985)

In a hole in the ground there lived a hobbit. Not a nasty, dirty, wet hole, filled with the ends of worms and an oozy smell, nor yet a dry, bare, sandy hole with nothing in it to sit down on or to eat: it was a hobbit-hole, and that means comfort.
J.R.R. Tolkien: The Hobbit (1937).

Upshot:

- read and listen widely
- find what you like and think about why that is
- translate technical terms into phrases many people can understand
- experiment to seek and find your own voice
- then …….
- *Use it.*

www.kennytaylor.info 2014

Workshop Descriptions, further information & links

Workshop A Science Writing for Kids Steve Brusatte, School of GeoSciences, University of Edinburgh palaeontologist and children's book author

Getting kids enthused about science, nature, and the world around them is an important, yet challenging, goal. Presenting information to children is very different than presenting information to adults. Children usually have less background knowledge about complex scientific concepts and a smaller vocabulary than adults, but at the same time, they have a propensity for awe and wonder that many adults sadly lose as they grow up. We shouldn't shy away from trying to communicate geoscience concepts to children, but should embrace it and try to tailor our message to children. In this practical workshop Dr Brusatte will share some of his experiences writing books on dinosaurs for children, visiting primary and secondary school classrooms to speak to children about science, and delivering public lectures for school-aged groups. Group activities will challenge workshop participants to take a fairly complex scientific story and distil it down into a fun, engaging, relevant, and understandable message for kids.

Workshop B Museum labelling Neil Clark, University of Glasgow, palaeontologist and author

Museum labels can be frustrating for the visitor – condescending to some and overly complex to others. How do museums strike the balance? Who is their target market when writing labels? How do museums draw on their knowledge of geodiversity and condense it into short paragraphs? There are many techniques used in the writing of museum labels so as to include the maximum information in as few words as possible. The Hunterian in Glasgow University mounted many exhibitions in the last 20 years that Dr Clark has been employed there and he has edited and written many of the texts to fit with the templates imposed by exhibition design. In this workshop you will be challenged to write a museum label by retaining as much relevant information as possible whilst still maintaining the interesting facts. These techniques have also been used by Dr Clark to write several children's books on dinosaurs, more academic books on amber and gold, as well as many research publications on a variety of geological topics.

Museums have a huge number of different labels from the collectors' numbers, accession number, catalogue entries, storage labels, to the various types of exhibition labels that the public are perhaps more likely to come into contact with.

To write an effective exhibition label, there are a number of guidelines that many museums follow. Rarely are exhibition labels written by a lone curator imposing their own idiosyncrasies and ideologies onto an unsuspecting public. More often the final product is the result of much group discussion and negotiation between curators, designers, and an editor. The editor has control over the writing style; the designer has control of the word count; and the curators are included for their intellectual input.

It doesn't always work to the above formula as projects may have external factors that influence the content of the text as well. Producing an exhibition is very much like making a cauldron of soup. The ingredients are the content, added spices are the editor's influence and the size of the soup plates are controlled by the designer. If we extend

the analogy further, then the cauldron is the 'big idea', the flames are the driving force, and the plate of soup is the end product that is hopefully palatable to the diner (the audience).

In order for the consumer of an exhibition to be satisfied with the end product, the team must have a clear idea of the needs of the visitors. The team must ask themselves "What is it that the public want to know?" rather than "What is it that I think the public should know?". This way the public is more likely to learn through enjoying the exhibition experience.

An exhibition label should also be concise, make a point, and be accessible. It should not insult the public's intelligence by being too simple (dumbing down), nor overly complex, but should challenge, inspire and kindle an interest in the 'big idea'. When writing labels it may be useful to consider the following notions:

- Writing clearly is NOT dumbing down
- Don't waste words on what visitors can see
- Tell a story but don't write a book
- Interpretation is neither fact nor fiction but a revelation
- Don't write a Wikipaedia entry
- Don't assume the visitor is you
- Museums can be random access – if you mix up the labels, is the 'Big Idea' still there?
- 5 words per second – 50 words in 10 seconds so longest panel should be 300 words
- Don't use colloquialisms (eg: 'Old as the hills' or 'outwith')

The structure of a label is also important and writing them in a journalistic manner can make them more readable. The specific information should be given first before the more general information. This allows the visitor to glean the crucial storyline without having to read the full 100 or 300 words.

Despite the effort that goes into writing labels for museum exhibitions, it is acknowledged that very few visitors will read the full labels and spend more time interacting with the objects. The label is still an important part of the exhibition as it allows the visitor to further engage with the objects within the context of the 'big idea' (the 'big idea' is the theme of an exhibition and not a topic).

Sometimes various mathematical tools are used to help the label writers to produce something that can be easily read by the visitor. These are called readability tests. One such test is the Flesch-Kincaid readability test that can be used to calculate a grade level as well.

Readability Test: (0-30 = university graduate level; 60-70 = understood by 13 year old; 90-100 = understood by 11 year old)

$$206.835 - 1.015\left(\frac{\text{total words}}{\text{total sentences}}\right) - 84.6\left(\frac{\text{total syllables}}{\text{total words}}\right).$$

Grade level: (American grade system from primary through secondary = grades 1-12; college and university levels = 13-21; graduate level and above = 22+)

$$0.39\left(\frac{\text{total words}}{\text{total sentences}}\right) + 11.8\left(\frac{\text{total syllables}}{\text{total words}}\right) - 15.59$$

The above text produces the following levels: Readability: 68.6, Grade: 7.9

This suggests that the above text is probably good enough for a museum label!

Workshop C Creating compelling stories in the geosciences Lara Reid, science writer

Communicating science clearly and accurately is vital, particularly in this high-technology age where information is at everyone's fingertips. People often want information in smaller and smaller chunks, and maintaining accuracy under these circumstances is not easy. One of the most important goals in science communication is to tailor your writing specifically for different target audiences. Finding points of interest in your research and telling a good story is half of the battle; the other half should be spent in careful consideration of your reader. What would they likely find interesting and approachable? How might they relate to your work? It is possible for most scientific research, no matter how complex, to be described and explained clearly and accurately enough for the general public to understand. In this practical workshop, we will cover the basics of 'story-telling' for different audiences in the geosciences.

When writing a piece for a wider audience, the key is to know as much as possible about the people you are writing for. Be(a)ware of your target reader! Try to pitch your work at a level that is of interest to your audience, avoiding long, convoluted or highly-technical sentences. If it is not possible to 'know' your audience before you begin to write, aim to explain any complex concepts using simple language and make use of metaphors and similes to engage the reader and help them follow the ideas in the text more easily.

I would advocate using technical language to a certain extent, but it should always be defined as clearly and simply as possible on first use. Glossaries have their place, and can certainly be used, but I would avoid using them for work targeting a wide audience. 'Academic' audiences are far more used to coping with technical, subject-specific language, so a glossary in work aimed at 'academic, educated' audiences would not interrupt the flow of the sentences as much as it might for more general readers.

Further 'style points' include:

- Never use 'academic journal paper' style for general readers. Most readers 'switch off' when they encounter long noun phrases.
- Use active verbs, no passive voice (avoid latin / greek-based terms if there is a suitable, simpler alternative)
- Place people in your stories (including yourself, if relevant!), not just ideas and theories
- Vary sentence lengths
- The all important first sentence – attempt to capture the 'whole story' in the first sentence or two, in order to catch the reader's attention / imagination
- Start with the results and how they fit in the context of a 'big picture' – the 'inverted pyramid'
- 'Join the dots' between isolated events: never assume that your reader knows the information in between!
- Use technical jargon – but always define terms on first use
- Avoid too many acronyms
- Make use of analogies, metaphors and similes

Remember, whatever your background, job or interest is in Geodiversity, your voice is important! The more people we have writing about Geodiversity, the better – science with a 'view from everywhere' approach is far more interesting, engaging and productive for everyone concerned.

Workshop D Panels: Interpretive versus information - what works best where Colin Macfadyen, SNH

Panels may be found at a whole variety of locations, ranging from historic and cultural sites to natural heritage areas with geodiversity features of interest. Panels generally are used to present salient points of information, to inform and guide visitors, but and can also be used to inspire and spark interest in areas that the visitor may not be aware of, and in doing so interpret a feature or fact they may otherwise never have been aware of. This workshop will examine aspects of information and interpretive panels and draw out the important distinctions that ought to be considered when preparing geodiversity content to ensure adoption of the most appropriate style. Ideal for participants considering preparing a panel for a geodiversity site. Feel free to bring along your ideas for discussion.

Panels positioned at locations of natural and cultural heritage significance, can be useful in helping to elucidate the features of interest for the general public. When preparing a panel, care must be taken to determine the audience and which approach to adopt, either provide information, or interpret. Information can work well in instances where the audience is already cognisant of the feature being visited. However, if the aim is to introduce a feature of interest to an audience that is unlikely to be aware of its presence, significance or value, then an interpretive approach is essential.

Key slides from the introductory presentation:

Slide 1 - Panels: interpretive vs information – what works best where

Slide 2 - Environmental interpretation is an imprecise concept.
At its simplest it is a way of increasing people's understanding and enjoyment in relation to some aspect of the world around them.

Slide 3 - Defining interpretation (SNH views)
1. A communication process, which seeks to translate the technical and expert account into a story the visitor can relate to.
It is a means to an end, not an end in itself.
2. Reveals meanings and relationships, unlike information which presents a series of facts. Interpretation, however is based upon information.
3. Involves first-hand experiences, where people are directly involved with the natural heritage. The most meaningful learning experiences come through personal contact.

Slide 4 - Concept of recreational learning

- In an area being interpreted, the main reason for visitors coming to the site is for the recreational activities available.
- Taking part in interpretive programmes is NOT a main reason for the visit.
- Remember that the visitor is in a "holiday frame of mind" and wants to have fun!

Slide 5 - The interpretive theme

- Is the central or key idea of any interpretive presentation.
- Be stated as a complete sentence.
- Provides organisational structure and clarity of understanding.
- Once a theme has been developed, everything else tends to fall into place.
- People having experienced good interpretation should be able to summarise it in one sentence – i.e. the theme.

Slide 6 - The two most important questions you have to ask yourself and then answer when interpreting something:

- "WHY would a visitor want to know that?" And
- "HOW do I want the visitors to use the information I am giving them?"

Slide 7 - Freeman Tilden's principles advocate that interpretation should:

- provoke curiosity
- relate to everyday experiences of your audience
- reveal a memorable message

Slide 8 - For interpretation to be effective, it should:

- be based on Tilden's principles;
- stimulate the audience's imagination;
- be relevant to the audience's needs;
- offer a fresh insight; and
- be appropriate to the site or object

Sources of information on interpretation on the web:

Introduction to Freeman Tilden, the 'Father of US Park Service Interpretation', and his principles
http://www.nps.gov/bestideapeople/tilden.htm
http://www.wildflower.org/docs_docents/Interpretation%20&%20Tours/Tilden's%20Principles.pdf

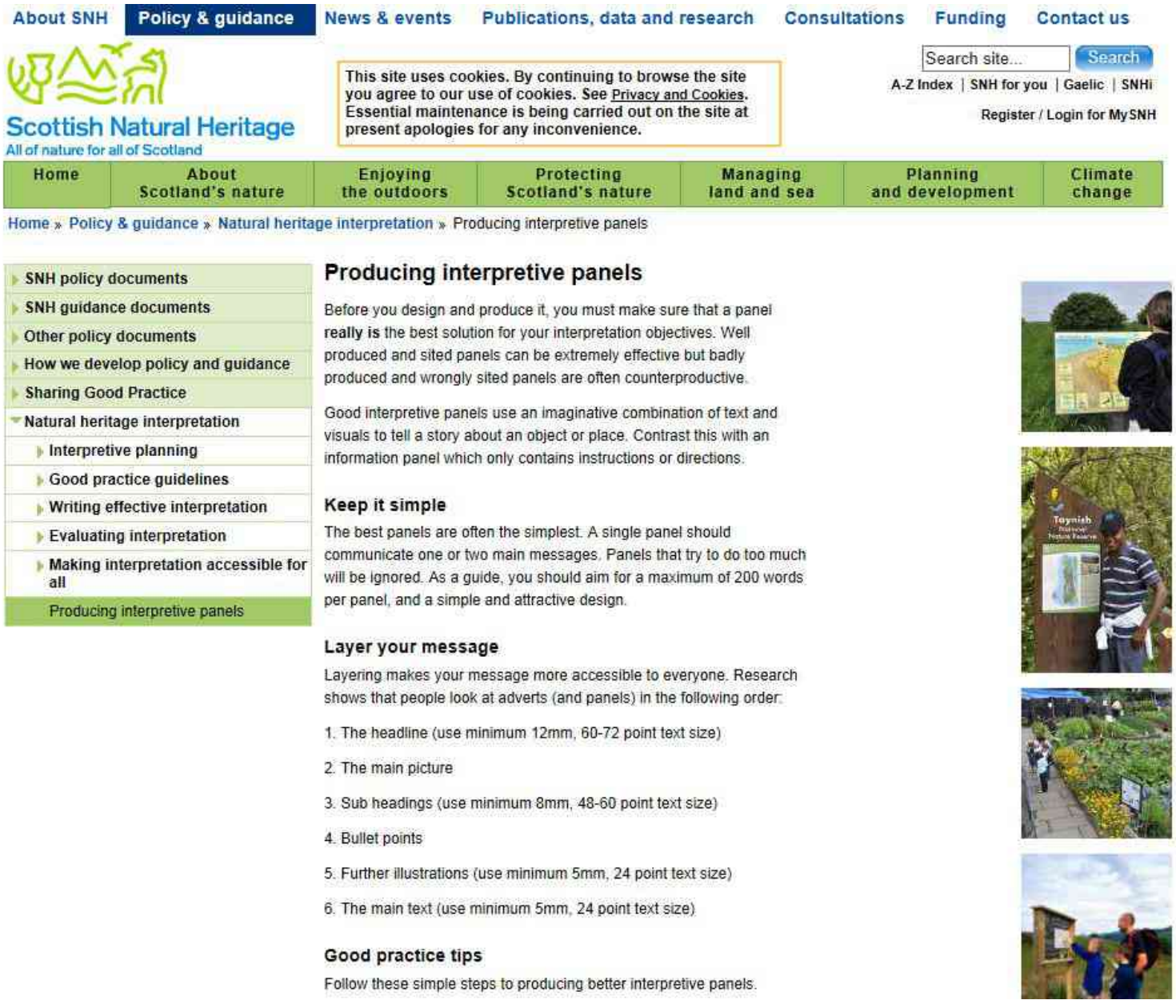
John Veverka website and products – Some guidelines and an insight into the profession and business that is interpretation
http://www.heritageinterp.com/whatis.htm
http://www.heritageinterp.com/
http://www.museumsetc.com/products/interpretation

Interpret Europe – definition of interpretation and general ethos to interpreting heritage features
http://www.interpret-europe.net/top/about-interpret-europe.html

Scottish Natural Heritage – good practice guidelines and links
http://www.snh.gov.uk/policy-and-guidance/heritage-interpretation/
And guidance specifically on panels:
http://www.snh.gov.uk/policy-and-guidance/heritage-interpretation/producing-interpretive-panels/

Sam Ham – Another US interpretation guru
http://nairegion7.wordpress.com/member-services/newsletter/peaks-valleys-the-blog/546-2/

SNH guidance on panels from SNH website – 'Grabbed' 18 November 14



Text

- People decide in seconds whether they will read your panel so it must look attractive and be accessible at a glance.
- Write in a lively and conversational style in short sentences and paragraphs.
- Avoid jargon and technical terms.
- Relate to your audience by by referring to them as 'you'.
- Use active rather than passive verbs (e.g. 'we manage' is far better than 'this site is managed by').
- Use metaphors, analogies and comparisons Use humour, poetry and prose.
- Show your text to someone who doesn't know the subject to see whether your message is coming across loud and clear.

Visuals

- Visuals can be photographs, drawings or illustrations. They have important roles in communicating with your audience.
- Visuals should illustrate something the visitor can't already see for themselves.
- Drawings are often better at illustrating something than photos.
- All illustrations should have a clear relationship with the text.
- All illustrations should be clearly labelled or annotated.
- Allow sufficient time and money to research and source visuals. Commission drawings if necessary and pay copyright fees.

Maps

- If a map is needed on an interpretive panel it must be clear and easily understood.
- Make sure you have copyright clearance for the map.
- Only include information that is really necessary.
- Make sure the map is large enough for the panel.
- Make sure the design is clear and easily understood. Consider using an oblique '3-D' map if possible.

Design and production

- Always involve your designer at the earliest stage and provide them with all relevant information about your panel such as why, who for, the site layout etc.
- At an early stage you should decide what materials you want to use for the panel by considering what will best enhance the on-site experience and blend with the surroundings.
- A number of production techniques are available depending on your design, budget and desired lifespan of the panel. Most manufacturers can provide up-to-date technical advice on each technique they offer.
- Make sure your panel is properly maintained by keeping its surfaces clean, tightening all fittings and cutting encroaching vegetation etc.

Workshop E Science and Social Media – How will you get your message out there? Isla Myers-Smith, School of GeoSciences, University of Edinburgh

Science is changing rapidly. It used to be that academic discourse happened through letters, printed journals and books. Now science is online. The internet and social media are opening the Ivory Tower up to the public and providing all sorts of engagement opportunities. But, before we as scientist can engage, we need to figure out our message and how we can best communicate it. In this workshop, we will cover the basics of branding yourself and your message. We will explore the use of blogs, twitter, websites, YouTube and more to communicate science. Have you ever wanted to improve your web presence, start tweeting or blogging or go public with your science? Then this is the workshop for you!

Workshop F Gaia's Library - Bring a favourite piece of geopoetry or geoprose, and try out one of your own Earth-works! Simon Cuthbert, University of West Scotland

You're invited to bring along one or two of your favourite pieces of creative writing about landscape and geology and, if you like, this can be a friendly forum to try out your own writing. We can discuss what makes it special to you - the images it creates, the story it tells, the style, or the history and significance of the piece. We might also consider the different roles and messages offered by technical and creative writing about the Earth. It is intended that we will collate some or all of the pieces presented in this workshop into a thematic set for the enjoyment of Forum members or perhaps a wider readership.

The message from the "Gaia's Library" session is that there's a whole range of material out there - prose and poetry, song lyrics and even riddle-songs, in the form of work by well-known authors, lesser-known but compelling works and really nice writing by members of the Forum and their friends. Simon and members of the Forum will bring together some of these contributions and they will be hosted on the Forum's website.

Workshop G What should we do about Siccar Point? Angus Miller, Scottish Geodiversity Forum

Siccar Point, described as the most important geological site in the world, is well visited by geoscientists but virtually unknown by the general public. The unconformity has changed little since James Hutton first discovered it in 1787. A beautiful natural site in a remote location, at the foot of a steep grassy slope, but it lies just a few miles from the A1 road. Written information – interpretation boards, leaflets and websites – is sparse. The Forum intends to work with partners to promote Siccar Point better. How should we proceed? Who should be involved? What is our ultimate objective for the site – a “Knockan Crag” type development or should the site be left exactly as it is? Discussion workshop, one session only.

Scottish Natural Heritage
All of nature for all of Scotland

***Thanks to Scottish Natural Heritage
for financial support for this conference***