

Thinking about Karst and World Heritage

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The Basis of World Heritage

- ▶ *Sites are only listed on the Register if proven to be of **Outstanding Universal Value***



Current Operational Guidelines

are looking to establish a balanced, representative and credible list

- ✦ *But it is recognised that this must be subsumed under the OUV mandate*
- ✦ *And genuine representation of all natural systems will not be feasible nor desirable*



Current Initiatives include

- ✦ *A palaeontological sites study which reviews existing sites and identifies gaps*
- ✦ *A process now working towards developing a similar report on geological sites*
- ✦ *A recently distributed broadly based Strategy Paper which discusses general principles and then examines representation across biomes and biogeographic regions*



The only karst-specific list:

- ▶ *Proceedings of the Asia-Pacific Forum
on Karst Ecosystems and World Heritage*
- ▶ *Mulu 2001*



This paper will

- ✦ *Identify the extent to which most karst sites have wide-ranging multi-dimensional values*
- ✦ *Review the characteristics of the currently inscribed karst sites*
- ✦ *Examine the feasibility of categorising karst sites and identifying significant gaps*



Some 50 existing WH karst sites

- ✦ *Many of these have other values and in some cases, the nomination and assessment processes, and hence management, give little attention to karst values*
- ✦ *Only three are listed as mixed sites, while another nine are inscribed only as cultural sites*



Karst often has . . .

- ✦ *Invaluable geological data
(particularly in the cave floors)*
- ✦ *Interesting geomorphic structures
and processes*
- ✦ *Characteristic surface landscapes*



And . . .

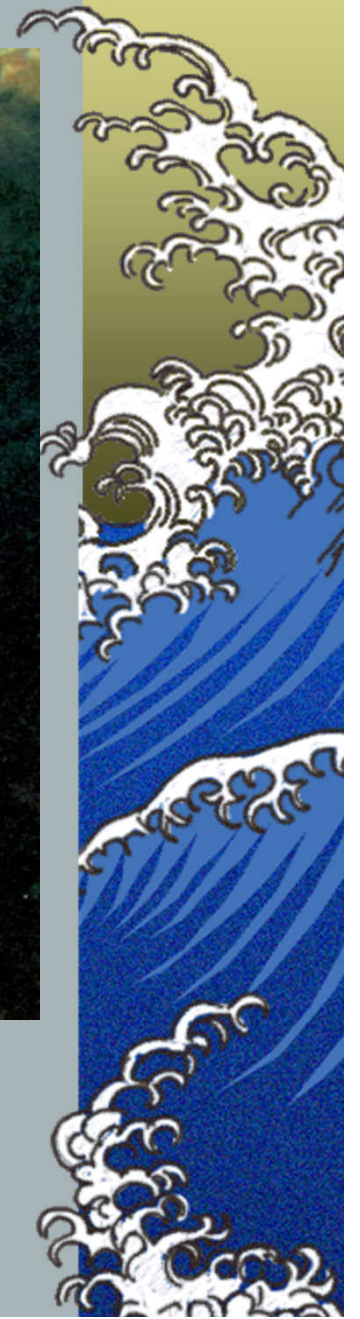
- ✦ ***Important surface ecosystems***
- ✦ ***Even more important subterranean ecosystems***
- ✦ ***Fossils***
- ✦ ***Cultural heritage, pre-historic, historic and living***



Complex sites with multiple karst (and other) values

- ✦ ***Mammoth Cave***
- ✦ ***Canadian Rockies***
- ✦ ***Nahanni***





And in Europe

- ✦ *Aggtelek – Slovak Karst*
- ✦ *Skocjanske*
- ✦ *Western Caucasus*
- ✦ *Durmitor*





Or the Asia-Pacific

- ▶ *Tasmanian Wilderness*
- ▶ *Blue Mountains*
- ▶ *Wulingyuan*
- ▶ *Lorentz*
- ▶ *Te Wahipounamu*
- ▶ *Thung Yai Hua Kha Khaeng*
- ▶ *Gunung Mulu*





But there are many areas which have outstanding special features that really shape their total character. We have already included some in the generalist group which we have just discussed. But let us look at others.

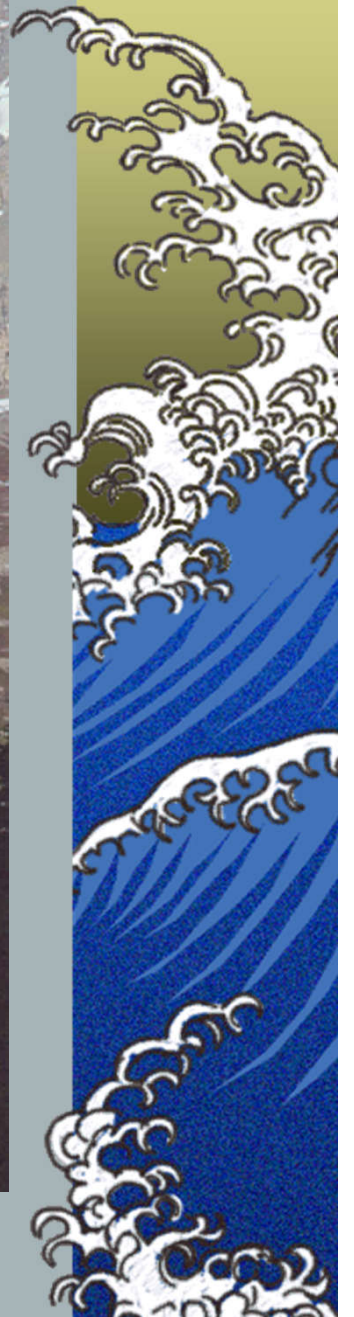


Alpine Karst

▲ *Canadian Rockies*

▲ *Pyrenees / Mount Perdu*





Island Karst

✦ *East Rennell*

✦ *Henderson*

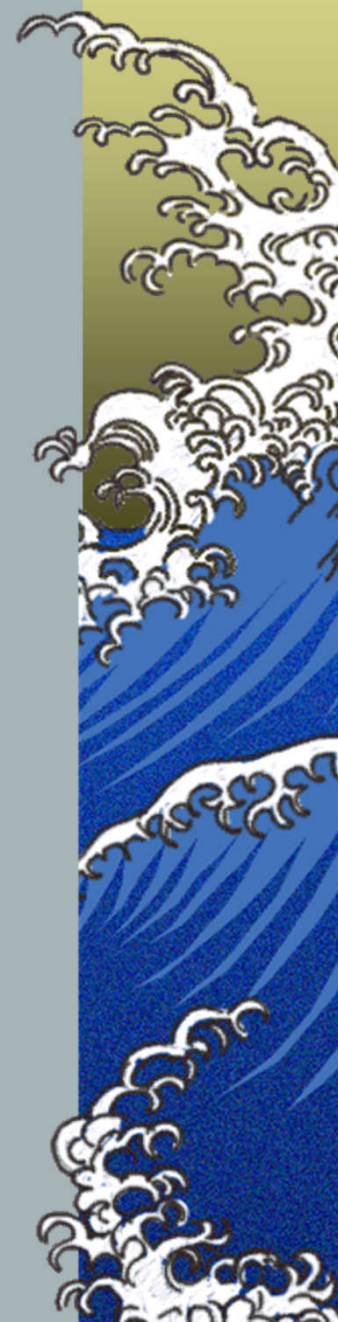
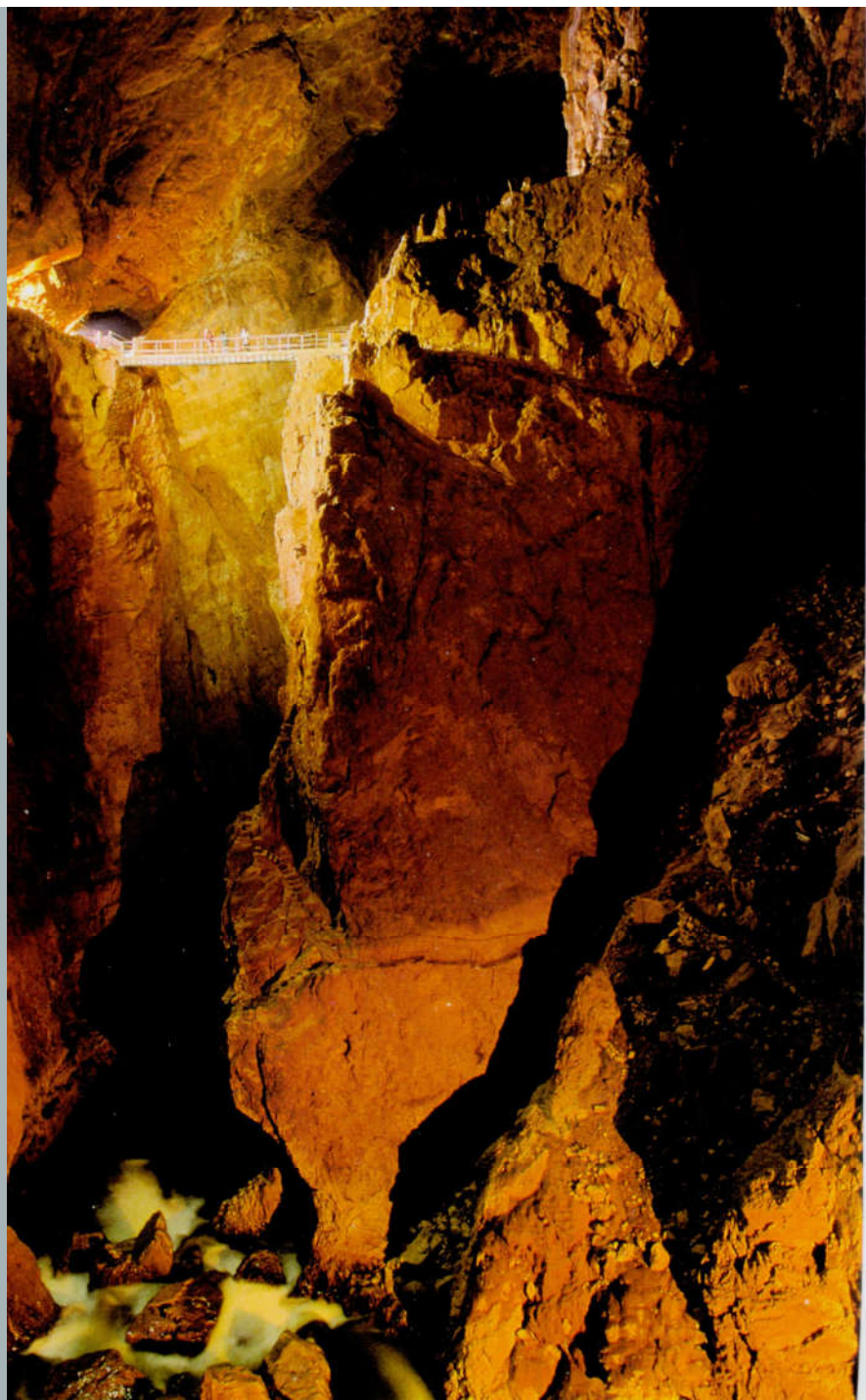
✦ *Alejandro de Humboldt*



Big River Karsts

- ✦ ***Puerto-Princesa, Philippines***
- ✦ ***Skocjanske Jame, Slovenia***
- ✦ ***Phong Nha Ke Bang, Vietnam***





Tower and pinnacle karst

✦ *Ha Long Bay*

✦ *Tsingy de Bemaraha*

✦ *Vinales Valley*





Travertine Terraces

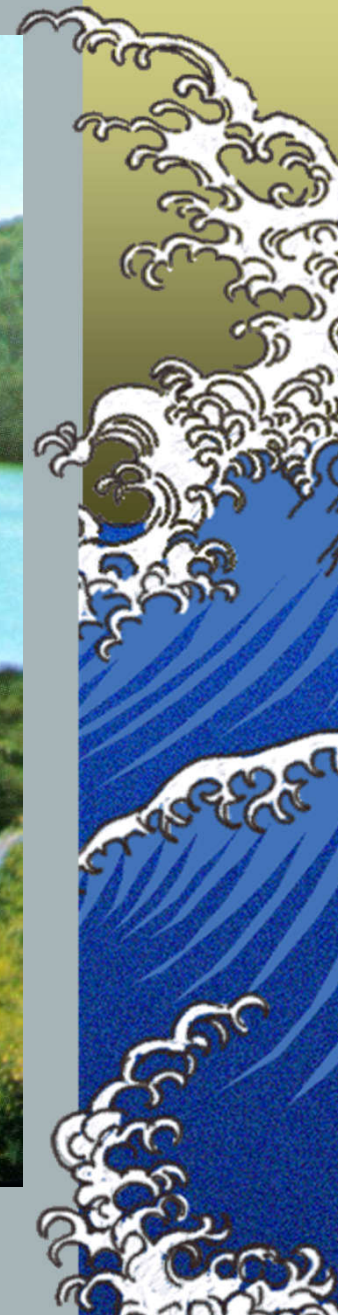
✦ *Huanglong*

✦ *Jiuzhaigou*

✦ *Pammukale*

✦ *Plitvice*





Other Landscapes

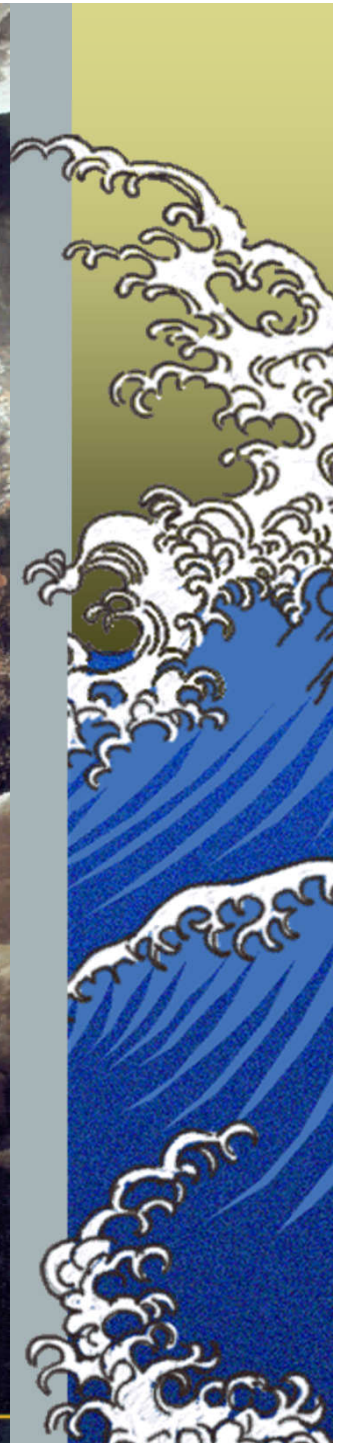
- ✦ ***Coastal Terraces of Cabo Cruz***
- ✦ ***Lake Baikal***
- ✦ ***Sodra Olands Odlingslandskap***



Sulphur-based Karst

- ✦ ***Carlsbad Caverns, where its massive gypsum speleothems point to its origins, and where the first significant research on the role of microbiota in cave development was carried out***





Karst in Quartzite

✦ *Cainama*

✦ *Wulingyuan*

✦ *Purnululu*





Then there are the 9 cultural sites. But most karst sites have cultural value, even if not at the OUV level

Similarly, many have very high biodiversity values but these are not FFF (Fur, Feathers or Flowers) so they are often overlooked in the assessment and nomination processes



Current identified priorities

- ✦ *The recently published strategy paper identified a number of priority areas for consideration*
- ✦ *Although karst was not a consideration, a number may well include karst*



They include

- ✦ ***Namib and Central Asian Deserts***
- ✦ ***Forests in Madagascar and New Caledonia***
- ✦ ***Marine sites in Fiji and Palau***



Some other priorities ???

- ✦ *There are only two alpine karst areas – there are important others with quite different characteristics*
- ✦ *The European Alps*
- ✦ *Tibetan Plateau*
- ✦ *Kahurangi, New Zealand*





Sulphur-based Karst

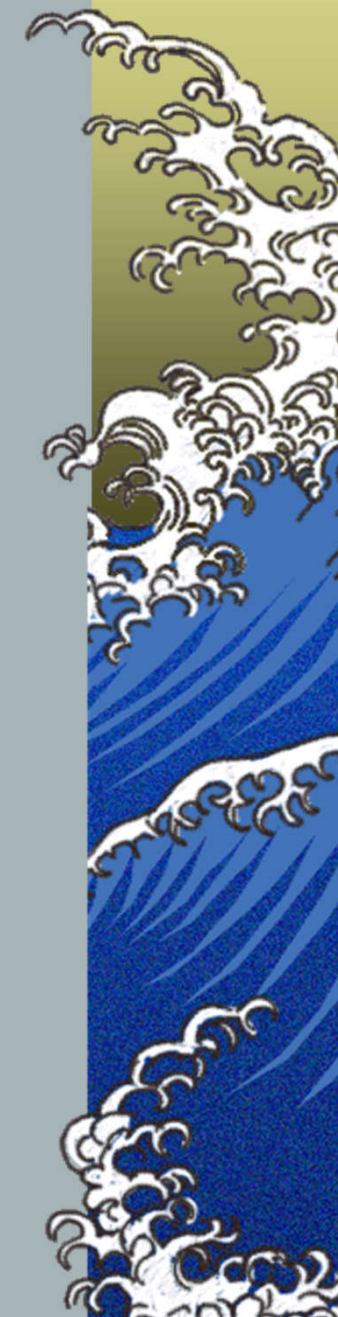
- ▶ ***Carlsbad is the only sulphur-based karst site listed but the most important such sites are Movile and Cueva de Villa Luz***



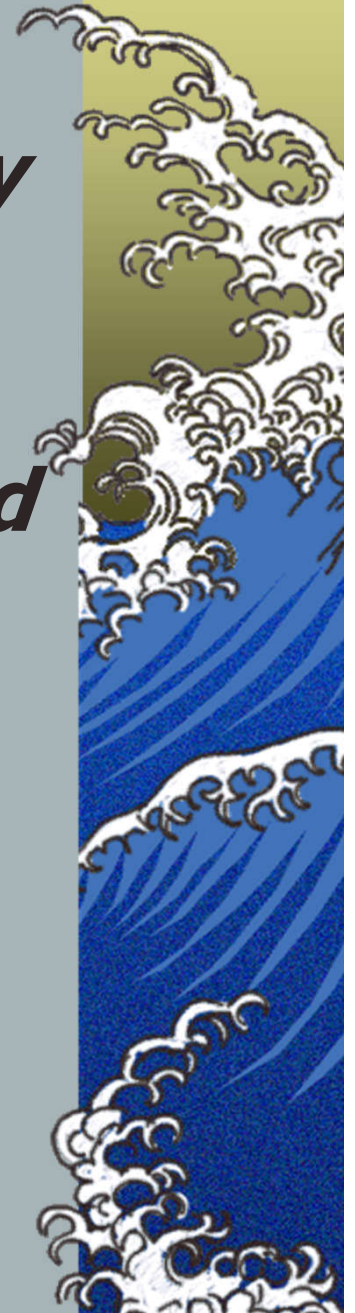
And other Gaps

- ✦ ***Although the wonderful cultural site at Chichen Itza is listed, this cannot be said to properly display the values of the cenote karst. The most outstanding in the world is the Yucatan***





- ✦ ***The only marine site is Shark Bay with its stromatolites***
- ✦ ***Other possibilities include Bahamas with the Blue Holes and the Black Hole***
- ✦ ***Some of the remarkable submerged caves of the Caribbean or Pacific***



Other Rock Types

✦ ***Gypsum***

✦ ***Magnesite***

✦ ***Salt***



Looking Ahead

- ✦ ***This is only a very preliminary skirmish***
- ✦ ***I hope you will be able to provide comments and criticism and thus expand upon it, and will keep in touch as it evolves***

