

INTERNATIONAL UNION OF SPELEOLOGY
UNION INTERNATIONALE DE SPÉLÉOLOGIE

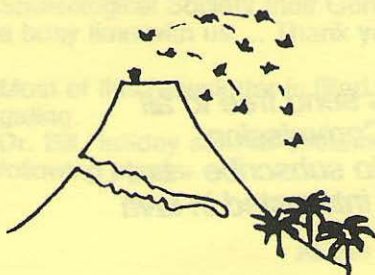
Commission on Volcanic Caves

LAVACAVE SYMPOSIUM

ICELAND - Sept. 2002

<http://www.iceland2002.com>

October 2000



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Honorary President Dr. W.R. Halliday

Chairman & editorial address

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*This Newsletter is send free to all
members of the Commission.
It is not possible to subscribe - but
will be send to all interested in lava
tube caves.*

Heard from:

Mrs. Conny Spelbrink - Canary Islands. Due to her article in N.L. 25 about tree-molds she was contacted by Prof. Honda. He will probably go to the Canary Islands to study them.

Mr. István Eszterhás - Hungary, President Commission for Pseudokarst. During the holidays (July 2000) I did much work in the Hungarian basalt-mountains. We found new caves, and extended others.

Prof. LEE Byung-Hoon - Seoul, Korea.
He had sad news. In old lists of commission-members is Prof. Hong Sy Hwan. We did not hear from him any more, but Prof. Takanori Ogawa gave an address which might reach him. After a long time the news came (from Prof. Lee): Recently we had a symposium on cave conservation in Seoul and I learned Prof. Hong Sy Hwan passed away on Dec. 30, 1999, in the age of 74.

Of course this is very sad news.

Prof. Lee adds: I am awefully sorry for not having been able to answer your letter of Nov. 1 last year. I was in great physical difficulty taking medical care, stopping my professional life last year. Sorry to hear this Prof. Lee, but thank you for the information.

Than the very good news!

Iceland is going to organize definitely the 10th International Symposium on Vulcanospeleology. It will take place ½ September 2002. Info on <http://www.iceland2002.com>

Apparently Iceland was very popular this year - I myself there, Greg Middleton there, Dr. Chris Wood, from the glacier-cave commission Prof. Adolpho Eraso with a Spanish crew. From the Icelandic Speleological Society their German member. Dr. 'Siggi' Jónsson had a busy time with us.... Thank you for the trip to Àmahellir Sigg!

Most of this Newsletter is filled with the 'arguments' on the Mowich-gating.

Dr. Bill Halliday sent all documents concerning this - just find them on following pages.

All the best,



Mowich Cave History and the Biology of Townsend's Big-Eared Bats

April 18, 2000

Prepared by

Michael Hupp, Planning Staff and Administrative Officer, Umpqua National Forest in consultation
with Jim Nieland, Regional Cave Specialist, Gifford Pinchot National Forest

Background Information: Townsend's big-eared bats are in decline throughout the Northwest largely due to vandalism and disturbance at roost sites. This species uses caves for hibernation and to give birth and rear young at maternity roosts. Studies show that only one percent of all mines and caves in Oregon is used as maternity roosts, and 10 percent for hibernation. Specific temperature and humidity conditions must be present for the sites to be used. Mowich Cave on the Diamond Lake Ranger District of the Umpqua National Forest is used for both maternity and hibernation, and is one of less than ten known maternity sites in the State of Oregon.

Only two colonies are known in Douglas County. Information on bat use at Mowich Cave dates back to 1958 with Earl F. Moore's anecdotal accounts of "thousands of bats disturbed from clusters as large as a wash tub." (Since big-eared bats roosting density is about 250 individuals per square foot, a washtub-sized cluster would contain 1225 bats.) By the late 1980's the population count had declined to 50, then to just 10 in 1999. Years of monitoring by the Diamond Lake Ranger District documented concerns about loss of this colony due to human disturbance. The Mowich Cave colony may be at the verge of extinction. J.M. Perkins (1990) documented three maternity colony extinctions in Oregon between 1980 and 1990 (Idaho State Conservation Effort Report 1, 1995). All population declines have been known to be due to human disturbance of roost sites.

Townsend's big-eared bat colonies are very sensitive to disturbance. Willful vandalism – such as building fires, burning bats with torches, shooting, throwing rocks, or striking roosting bats with clubs – has all been recorded in western states. The most common damage is less obvious and in most cases the perpetrators may not know they have caused a problem. Simply walking past hibernating bats can cause them to come out of hibernation. Typically it takes between 15 and 30 minutes for bats to sufficiently raise their body temperature to be able to fly, often after the people, and the perceived danger, have exited the cave. Researchers estimate that 10-30 days of a bat's stored body fat is used up by each disturbance (Tuttle, 1991). It is easy to see why a bat that may require 70 percent of its stored fat to survive a winter can end up with inadequate reserves after as few as three or four disturbances. Young bats are particularly vulnerable.

People visiting maternity roosts can cause mother bats to drop their young, or abandon the young and the roost, if a threat is perceived. Retrieval of young is beyond the ability of mother bats so dropped young usually die. Abandonment of a roost can result in a full year's loss of reproduction, and if it is repeated over a number of years, large reductions in colony size may take place. Under ideal circumstances a female big-eared bat will give birth to one pup per year; as a result it may take decades for colonies to recover from disturbance.

After years of documented decline of Townsend big-eared bat populations in Mowich Cave and other sites, the Forest Service in conjunction with the U.S. Fish and Wildlife Service and the Oregon

Department of Fish and Wildlife, chose to limit access to Mowich cave to ensure protection of the species. The Forest Service lists Townsend's big-eared bats as a "sensitive" species.

Species on the Regional Forester's Sensitive Species List are those for which viability concerns have been raised due to population declines. To prevent a trend toward listing a species as endangered or threatened under the Endangered Species Act (ESA), the Forest Service has implemented actions necessary to meet the viability requirements under the National Forest Management Act (NFMA). The Townsend's big-eared bat has been on the Regional Forester's list since 1989.

Scientific information for management of this species on the Forest has been drawn from *Habitat Conservation Assessment and Conservation Strategy for the Townsend's Big-Eared Bat*, published in August of 1995 by the Idaho State Conservation Effort, Report 1. Standard C-2 of this report outlines visitor use restrictions to protect Townsend's big-eared bat populations during critical time periods as follows:

"Close caves used for winter hibernacula to recreational visitor use from September 15 – May 15, and close nursery caves from April 1 – October 1. The critical time periods of hibernation and maternity activity may vary regionally and will be determined by a qualified biologist."

The gate on Mowich Cave was installed in 1992 in partnership with the U.S. Fish and Wildlife Service and Oregon Department of Fish and Wildlife. The U.S. Fish and Wildlife Service provided part of the funding for the gate. The Forest Service, U.S. Fish & Wildlife Service and Oregon Department of Fish and Wildlife determined that the decline of the bat is due to human disturbance and that a year-round closure is needed to prevent further harm to the species both for winter hibernacula and maternity roost protection.

The Federal Cave Resources Protection Act of 1988 (FCRPA), Public Law 100-691, establishes that "It is the policy of the United States that Federal lands be managed in a manner which protects and maintains, to the extent practical, significant caves" [Sec. 2 (c)]. In addition, the FCRPA provides that:

- "The Secretary shall take such actions as may be necessary to further the purposes of this Act. Those actions shall include (but not be limited to)" [Section 4 (b)] "Regulation or restriction of use of significant caves, as appropriate." [Sec. 4 (b)(2)].
- "The Secretary shall prescribe by policy or regulation the requirements and processes by which the initial list will be updated, including management measures to assure that caves under consideration for the list are protected during the period of consideration." [Sec. 4 (b)(1)(B)]

The Umpqua National Forest nominated Mowich Cave as a significant cave in 1995 and was formally designated on March 13, 2000.

Address until 6 July 2000:
6530 Cornwall Court
Nashville, TN 37205

Summer field address:
101 Aupuni St. #911
Hilo, HI 96720

8 May 2000

District Ranger
Diamond Lake Ranger District, Umpqua National Forest
2020 Toketee RS Road
Idlewyld Park, OR 97447

Dear Sir:

re: Mowich Cave gating

In the event that the information has not previously come to your attention, the Commission on Volcanic Caves of the International Union of Speleology unanimously adopted the following resolution on 16 September 1999 in Catania, Italy:

"The I.U.S Commission on Volcanic Caves considers Mowich Cave, Oregon, USA to be of exceptional significance because of its unparalleled geological setting beneath tens of meters of subsequent lava flows.

"The Commission deplores the lack of due process and lack of cooperative planning in excluding geoscientists and other concerned persons from this cave.

"The Commission urges:

- 1) immediate reopening of this cave to geoscientists,
- 2) removal of the disinformation sign now present in the entrance,
- 3) emplacement of an interpretive sign with accurate information, and
- 4) cooperative planning to protect both geological and biological resources and values of this exceptional cave."

This motion was enacted following a visit to the entrance of this cave in July 1999 by myself and another member of this I.U.S. Commission: Dr. Stephan Kempe, a well-known German geologist and vulcanospeleologist. We were shocked to find the cave gated, with no notice to appropriate organizations and individuals who should have been engaged in cooperative planning for protection of the resources and values of a world-class cave like Mowich Cave. Later I was informed by Bat Conservation International that this cave was gated to protect a summer colony of bats. But the cave is so small that the risk of revenge destruction of the colony by fire should have mandated a fullscale Environmental Impact Study even without consideration of the cave's geological values.

Dr. Kempe and I were further shocked by the sign visible just inside the gate. It bore the logos of Bat Conservation International, the U.S. Forest Service, and the U.S. Fish and Wildlife Service, but gave no name nor location for information about the cave, the closure, nor how any appropriate persons could obtain access through the locked portal in the gate.

Further, it asserted that this lava tube cave:

- 1) is a mine,
- 2) contains oxygen-deficient air;
- 3) contains toxic gases,
- 4) contains unstable rock, and
- 5) contains vertical dropoffs.

Dr. Kempe and I had specifically come to look for rock instability due to the unparalleled overburden of the cave; certainly in what we could see of the Entrance Room there was none. The references to oxygen-deficient air, vertical dropoffs and toxic gases in a lava tube cave in such a location were shockingly absurd.

Upon my return to Tennessee I consulted the two organizations which should have been most involved in cooperative planning to protect the geological and biological values of this cave: the Oregon Grotto (Chapter) of the National Speleological Society, and the Section on Cave Geology and Geography of the same national organization. Neither was aware of the gating.

Next I contacted the lead organization involved in the gating (as judged by the position of its logo on the sign): Bat Conservation International. It, too, was unaware of the gate which bore its logo so prominently, and began to investigate. I then brought the problem to the attention of the Chiefs of the U. S. Forest Service and U.S. Fish and Wildlife Service. To date I have received no feedback from them, nor from anyone else other than Bat Conservation International.

At this time I am informed by Bat Conservation International (but have no official confirmation) that:

- 1) this cave is a roost site for Townsend's big-eared bats, increasingly protected to avoid the need to list it as endangered,
- 2) the cave was gated to protect the colony from increasing human disturbance,

3) the gating was without knowledge or consultation of Bat Conservation International despite use of its logo,

4) interpretive signage at gated entrances is standard practice, but this particular sign was modeled after a sign BCI developed for mines, not caves. Therefore it is – at the least – inappropriate and misleading,

5) the lack of contact information on the sign is “inexcusable”,

6) legitimate researchers including geoscientists are not denied access to the cave, despite the sign. They must make arrangements in advance. However, there is no way for them to learn how to do so,

7) visits are properly restricted during hibernation and maternity seasons but there is no reason to close the cave at other times.

Bat Conservation International further informs me that a new sign with proper contact information “will be rectified soon, if it has not been already”. Presumably the other problems with this sign also will be or have been rectified.

Still further, BCI has informed me that it would welcome the cooperative approach to protection of both biological and geological resources, as called for in the IUS Commission motion. It did not inform me of any specific steps toward this, being taken by the U.S. Forest Service, and it did not comment on the potential danger of destruction of the colony by revenge-seekers.

All this has been brought to my attention rather unofficially, and as a result of what my informant described as “many long and circuitous conversations”.

In any event, it is now clear that the lead agency in this unfortunate matter is the U.S. Forest Service, not Bat Conservation International.

Therefore I am writing as Honorary President of the IUS Commission on Volcanic Caves, to request official notification as to what has been done and is being done by the U.S. Forest Service to comply with the provisions of the Commission resolution cited above.

So many months now have elapsed that there can be little excuse for further delay. Please let me hear from you at your earliest convenience.

Very sincerely yours,

William R. Halliday

William R. Halliday

Honorary President, IUS Commission on Volcanic Caves

cc: President, IUS Commission on Volcanic Caves (J.P. van der Pas)

Bat Conservation International

Mike Dombek, Chief, U.S. Forest Service

Jamie R. Clark, Chief, U.S. Fish and Wildlife Service

National Speleological Society Conservation Chairman (D. Jagnow)

Section on Cave Geology and Geography, National Speleological Society (G. Veni)

Oregon Grotto of the National Speleological Society (C. Larson)

Dr. Stephan Kempe

From: bnawrh@webtv.net (William Halliday)

To: jtrout/r3_coronado@fs.fed.us

Cc: Mhcaver@aol.com, gveni@flash.net, jkennedy@batcon.org

Subject: Mowich Cave, Umpqua NF

Dear Mr. Trout:

On September 16, 1999 the Commission on Volcanic Caves of the International Union of Speleology unanimously passed the following motion at its meeting in Catania, Italy concerning Mowich Cave on the Umpqua National Forest, Oregon:

"The IUS Commission on Volcanic Caves considers Mowich Cave, Oregon, USA to be of exceptional significance: because of its unparalleled geological setting, beneath tens of meters of subsequent lava flows.

"The Commission deplores the lack of due process and lack of cooperative planning in excluding geoscientists and other concerned persons from this cave.

The Commission urges

- 1) immediate reopening of this cave to geoscientists;
- 2) removal of the disinformation sign now present in the entrance:
- 3) emplacement of an interpretive sign with accurate information, and
- 4) cooperative planning to protect both geological and biological resources and values of this exceptional cave."

Because the disinformation sign showed the logo of Bat Conservation International as the lead organization in this unannounced closure, I wrote that organization on 21 August 1999, before the Commission meeting but after

contacting the Oregon Grotto and the section on Cave Geology and Geography of the NSS. In mid-October I was informed unofficially by a spokesman for BCI that:

- 1) BCI did not know about this gate, despite their logo,
- 2) on occasion, cave gates are built using BCI's name when they are not involved;
- 3) they were looking into the Mowich ave situation,
- 4) they regretted any problem, and
- 5) they expected to keep the Commission informed of their findings.

On 16 October 1999 I notified the Chief of the U.S. Forest Service of the above, requesting cooperative planning and preparation of an EIS on closure of this cave. I received no response from the Forest Service.

On April 5, 2000 I was notified by a spokesman for Bat Conservation International that, "after many long and often circuitous conversations", they had obtained the following information:

- 1) Mowich Cave is used as a roost by Townsend's big-eared bats, a species "of concern".
- 2) Mowich Cave was gated to protect this colony from increasing human disturbance.

3) This protective effort was done without the knowledge of or consultation with Bat Conservation International although its logo indeed indicated that it was the lead organization.

4) The language on the sign in the cave entrance is modeled after a sign created jointly by BCI and the Forest Service, but the actual language "is inappropriate and misleading". This was done without knowledge of nor approval of BCI.

5) The lack of contact information on the sign "is an inexcusable oversight, which I have been assured will be rectified soon.."

6) Legitimate researchers (including geomorphologists) are not denied access to the cave, but must make arrangements in advance. Visits may be restricted during the critical bat season.

Subsequently I was notified unofficially that the interim periods between the hibernation and the nursery seasons should present no problem from the standpoint of bat conservation.

On 8 May 2000, I therefore wrote to the District Ranger at Diamond Lake Ranger Station, outlining these facts and those discovered on the July 1999 visit by two members of this

Commission, and asking what had been done and what was being done to comply with the motion of the Commission.

I sent copies of these letters to the Chief of the Forest Service, to persons copied in this present message, to the Oregon Grotto of the NSS, to BCI, and other relevant persons.

To date I have received no response.

On or about 1 June 2000, I found and used the Umpqua website e-mail address, requesting permission to enter this cave in late October 2000 for definitive studies of the effects of the extraordinary overburden on the cave. I requested an immediate reply so that I could make travel plans in conjunction with the meeting of the GSA in Reno.

On June 5, 2000 I received a noncommittal acknowledgment from the Public Affairs Officer of the Umpqua, stating that I would receive "a more complete reply from us soon".

I have received no such reply.

Please let me know immediately if you can arrange this visit for me, and help begin some cooperative planning for this most unfortunate situation.

Very sincerely yours,

William R. Halliday
Honorary President,
Commission on Volcanic Caves of the International Union of Speleology



United States
Department of
Agriculture

Forest
Service
Umpqua
National
Forest

Diamond Lake Ranger District
2020 Toketee Ranger Station Road
Idleld Park, OR 97447
(541) 498-2531
FAX (541) 498-2515

File Code: 2670

Date: June 29, 2000

William R. Halliday
6530 Cornwall Court
Nashville, TN 37205

Dear Mr. Halliday:

This is in response to your letter of May 8, 2000, regarding Mowich Cave in which you raised several concerns about the gate closure of Mowich Cave. In the letter you urged:

- Immediate reopening of the cave to geoscientists
- Removal of the existing gate sign
- Emplacement of an improved interpretive sign
- Cooperative planning to protect geological and biological resources of the cave

I have reviewed the situation with the District and Forest employees who have staff responsibilities for wildlife, archeological, and geologic resources. Based on their counsel, I have made the following decisions:

1. The existing cave gate will remain locked to protect the unique biological, cultural and geologic resources of the site. As you noted in your letter, the site is both a maternal and winter roost for Townsend's big eared bat, a species listed as "Sensitive" by the Forest Service due to significant declines in populations, and relatively low numbers Region-wide. As the land management agency with administrative authority for the cave, the Forest Service has the responsibility to manage the site in accordance with federal law. To comply with the objectives of the National Forest Management Act and the Federal Cave Resource Protection Act, I feel the best course of action to maintain the viability of this species is to keep the gate locked. However, this does not mean that all access is prohibited. Some entry for scientific reasons is certainly possible if we begin to see increases in numbers of bats within the cave or if access is necessary to further the purposes of the Federal Cave Resource Protection Act. Each request to access the cave will be considered on a case-by-case basis weighing the value of each entry against any potential adverse effects to the unique biological, cultural and geologic resources of the site.

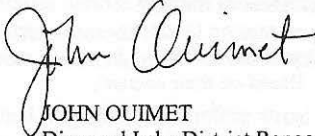


2. The sign at the cave will be replaced with a sign more clearly explaining the reason for the closure and identifying a contact point for additional information. We will post the new sign when installation won't adversely impact the biological resources of the cave.

3. An interdisciplinary panel including cultural, geological, and biological resource specialists will review requests for access to the cave. This panel will facilitate multi-resource planning and protection of resources within the cave. The panel will review the merits of each request and make recommendations. Following this review, I will make the final decision to authorize or deny the entry request.

I have enclosed a copy of a paper previously written about the wildlife resources at Mowich Cave. I hope you find it informative. If you are still interested in entering the site, I encourage you to provide us with the objective or purpose of the entry, proposed entry date and time duration to be spent in cave. Your proposal would need to explain how the entry furthers the purposes of the Federal Cave Resource Protection Act, and the considerations given to protect the population of Townsend's big-eared bats resident in the cave. This entry request will then be submitted to the review panel. If you have any further questions, please feel free to contact our office at the 541/498-2531. I hope you understand that our primary responsibility in this case concerns protection of the bat colony during all phases of their life cycle.

Sincerely,



JOHN OUIMET
Diamond Lake District Ranger

cc: Don Ostby, Umpqua National Forest Supervisor
Terry Farrell, Oregon Department of Fish and Wildlife

Enclosures

Address until 29 August 2000:
101 Aupuni St. #911
Hilo, HI 96720

Address 30 August - 31 December 2000:
6530 Cornwall Court
Nashville, TN 37205

23 August 2000

Mr. John Ouimet, Diamond Lake District Ranger
Umpqua National Forest
2020 Toketee Ranger Station Road
Idleyld Park, OR 97447

Dear Mr. Ouimet: re: gating of Mowich Cave

I regret the long delay in response to your letter of June 29, 2000. It arrived on July 5 while I was packing to leave July 6 for two months of intensive field studies. Only now have I had an opportunity to consider this letter and the enclosed "Mowich Cave History and the Biology of Townsend's Big-Eared Bats" It was instructive to learn that, after five years of inaction on the nomination of Mowich Cave as significant under FCRPA, it finally was designated a significant cave after the September 1999 resolution of the Commission on Volcanic Caves of the International Union of Speleology.

I note with grave concern your stated decision to only open Mowich Cave to appropriate geoscientific study "if we begin to see increases in numbers of bats within the cave (or if access is necessary to further the purposes of FCRPA)". The data in your enclosure makes it clear that no such increase is likely under your present management of the cave, specifically including the controversial gate. Your own cited data documents truly disastorous mismanagement of the biological resources of this little cave; following your illadvised gating the population has diminished to only ten individuals!

Truly it is amazing that you not only plan to continue this disastorous mismanagement but also use it as a reason to circumvent major provisions of FCRPA and the Cooperative Agreement between the U.S. Forest Service and the National Speleological Society. I am specifically referring to the provisions requiring federal agencies such as your district office to cooperate with "users of caves" in projects such as my proposal which are in accord with the overall intent of FCRPA and the Cooperative Agreement. I note your inclusion of the phrase: "or if access is necessary to further the purposes of FCRPA", but I also note its inclusion in a context which gravely distorts the overall context of that Act of Congress and that Agreement by the U.S. Forest Service. Rarely have I encountered a situation in which the cooperative planning requested by the IUS Commission on Volcanic Caves was more needed, or as overdue.

In response to the specific requests in your letter, I hereby reiterate my request to enter this cave for study of its unique overburden and any indications of stress which it may place on the stability of this cave.

I hereby reiterate my request that this study be during the last ten days of October, 2000, in the "window" of time between the summer maternity roost and the winter hibernaculum. It is my understanding that, despite what may or may not be appropriate in Idaho bat caves, Bat Conservation International believes that such a "window" exists in southwestern Oregon. Further, that is in accord with my own observations of *P. townsendii* in southwestern Washington lava tube caves over a period of about 30 years.

This study should require less than two hours, and would be facilitated and expedited if a member of your staff accompanies me to hold one end of a measuring tape and possibly take compass backsights. Informal discussions at this time could provide a very useful beginning of the cooperative planning so badly needed for this significant little cave. If you are really serious about permitting access "to further the purposes of FCRPA", you will approve this request.

While it is not a part of my request, it occurs to me that your entire "interdisciplinary panel" might welcome the opportunity to gain first-hand knowledge of the cave and its management problems at the time of my visit. Further, it would seem to be an ideal time to change the offensive present sign without much additional impact on the cave and its few remaining bats.

I specifically make this request in accord with the provisions and overall intent of FCRPA and the Cooperative Agreement cited above. I request an immediate decision in order to make necessary travel arrangements in conjunction with the Reno meeting of the Geological Society of America.

Very sincerely yours,

William R. Halliday

William R. Halliday

Honorary Chairman,

Commission on Volcanic Caves of the International Union of Speleology

P.S. please send me the name and address of the vulcanospeleologist(s) and other members of your "interdisciplinary panel" so that I may supply relevant information to them including (but not limited to) use of a secure fence instead of a gate to protect geological and biological resources and values of the cave.

cc: Bat Conservation International (Kennedy)
National Speleological Society (Veni, Horrocks, Werker,
Hood, Larson)
International Union of Speleology (van der Pas)
U.S. Forest Service (Trout, Ostby, Dombeck)

ICELANDIC WILD CAVES GO COMMERCIAL

Vidgelmir, Surtshellir and Loftahellir

Iceland has no tourist caves.

All caves, if you could find them, had free acces.

Recently however the Icelandis S.S. has been gating some caves to protect exceptional formations.

One of these is Vidgelmir.

Being recently (Aug. 2000) in the area I wanted to visit this cave, and tried to find the owner.

It turned out the former owner recently died and the new one is trying to make a living on doing (also) guided tours to this fantastic cave.

The minimum fee for a trip is 2400 ISK (US\$ 30). This can just be divided by the participants. I was lucky, two other visitors showed up, bringing the cost down for me to US\$ 10.

From previous visitors, and pictures, I knew this cave is a highlight of Iceland. So, what a disappointment - we went only 150 meters into the cave. All nice formations are much further in the cave. A price for the 'full' tour could not be mentioned - but way too high for me.

Here a listing of what I found in leaflets of caves with 'guided' tours.

Vidgelmir is located near Fljótstunga (tel. 435 1198).

This is around 100 km northeast of Reykjavik.

The cave is only a few km's from the house of the owner/guide.

Minimum fee 2400 ISK (= US\$ 30).

Since the cave is gated a guide is needed.

Surtshellir is not gated, and well signposted. It is also some 100 km northeast of Reykjavik. However, guided tours are possible.

These are 1200 ISK per person (= US\$ 15). Starting point is the Húsafell leisure and recreation center. Transport to the cave, around 10 km, is supplied.

Another cave, Loftahellir, is located near Myvatn (360 km northeast of Reykjavik). Not signposted (yet?), and difficult to reach by car. But locally well know, so there will be people who can give directions.

Not gated, but also guided tours are possible. All information at the tourist information sites around Myvatn. No price known.

