

*comhairle uamh-eolasach na monadh líath*

*the grampian  
speleological group  
bulletin*

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## CONTENTS

	Page Number
Editorial	3
Meet Reports	4
Additions to the Library	7
Vale: John Cornwall	9
Visit to La Cueva de San Marcos, Tenerife	9
Scotland's First Cave Book	10
Scottish Cave Rescue - An Update	13
Meet Report: Two Pyrenean Caves	14
A Survey of Elphin Hole	15
Caves, Crevices and Conundrums	18
More About the Cavern in Glen Crae/Croe	25
Radiolocation Using the Heyphone at High Pasture Cave	27
The Mysterious Case of the Disappearing Cave	30
Ossianic Endeavours - Exploring Caves on Staffa	38
Publications from the GSG	51
Seafield Cave, Kinghorn, Fife	52

Cover: This season's must-have caving gear at Allt nan Uamh. Laura Mitchell and Dawn Osborne at the ANUS Cave 40th Birthday Party, October 1988. Photo: A. Jeffreys

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## The Grampian Speleological Group

### Editorial:

#### *Tempora mutantur, nos et mutamur in illis*

Solo, I start sloshing down the stream, curving my torso round corners, giving walls an occasional high five, the water-worn, black broccoli rock hard and fast under my feet. It is easy going and I follow my ghost, striding four square along New Roof Traverse until a fragmenting floor, railway cream, like hardened, spilt paint, beckons me downward. Beyond are intricate climbs down into the black limestone, where I see my ghost, my id, my alter ego, dancing below on fingertips and toes like a childhood piper that I am drawn to follow. Feeling heavy, stolid, no flow, but with still the same eye analysing the yellow-etched shadows, still the commanding arrogance and disdain for obstacles. Just slightly slower, more ponderous. And my ghost laughs with glee, with ageless, endless anticipation of *below*.

So: here is Cathedral, Pulpit, Dome, dry comfortable shafts in a companionable cave. They are bedecked with rope, startling white, hanging mute and unavoidable. My ghost pauses, stares. No ladders offering climbs of delight? No gentle tinkle of metal in the quiet chamber? Disappointment. Regret.

“Stand aside, ghost” I announce as I rig up, “This is the present.” But it does not understand. Down I go, desperately heaving my weight to pass deviations, always above me, only just in reach.

After ludicrous expenditure of energy - all wrong for the technique - I land on the echoing chamber floor. I contemplate ahead: prospects of more rope; more technicalities; more energy recklessly expended. Ghost is at my elbow - how did he get down? His urges are for ‘onward’ but I back off. This has been far more tiring than ladders; enjoyment of the journey has been soured. Unfit, unfit and out of practice for sure but how, oh how I miss the freedom of those rungs! My ghost casually waves a farewell and plunges deeper into the system.

Alone, depressed, I submit, clip on and transport my body, dripping with sweat, back up to The Crypt, The Vestry. My rocky world fills with fog. Away from that repellent rope my torso curves round corners, high fives fend off the wall. This is so easy, so pleasant but my mood has dissolved. It is all gone, like my ghost. A spirit of caving past.

.....

Age is a curious thing. The mind retains all the youthful exuberance and drive which press-ganged me into potholing, knowing no obstacle and fearing no obstruction, and it is regularly puzzled by the failure of the body to maintain a terrier-like grip on cave exploration, refusing fences once cleared in a single bound. Probably the chief offenders are legs and feet. No matter what footwear I use, balance and dexterity seem elusive, and moves that once were undertaken without a thought are now approached carefully as slips, falls and ‘skites’ (brilliant word) threaten every second. Trashed knees play their part of course but unsteadiness seems to be a function of advancing years, especially when, due to a multitude of other interests and commitments, I cannot achieve my previously regular caving regime.

Perhaps this accounts for my expanding infatuation with caving history, a passion which I attempt to encourage in others as time rolls on especially insofar as it affects the GSG. In a mere five years we shall (incredibly!) celebrate our golden jubilee. So many members have come and gone, lost contact with the club and moved away, yet if they could be traced, what stories they would have to record. When I was truly active I looked scornfully on inactive members as ‘dead wood’. Well, my position has changed. No longer is there a struggle to keep the group active and energised; today we are truly ‘up and running’ and preservation of our past is important. So, if you are contemplating retiral from actual caving, please stay with us. A club is an extended family and Heaven knows there is plenty for non-cavers to be getting on with.

Meanwhile, I don't write myself off. There is a lot of cave left in me yet and my store of brute strength and ignorance is far from exhausted. That same mind which approaches caves like an eighteen year old continues to drive a thirst for all things underground. Holes, spotted on hillsides or found lurking in undergrowth, still generate the old "I wonder where that goes?" syndrome and noble shafts of the Yorkshire caverns still call me with their spray-whispered siren's song. I am a child of the dark - it is my destiny ever to walk along the paths of the earth's night.

Alan L. Jeffreys, Editor.

.....  
MEET REPORTS (To 4th March 2006; Edinburgh logbooks only):

There has been encouraging and widespread activity by the club in the past six months, probably the most active period for many years, and as a result new caves have been found. A collection of excellent sporting descents has also been achieved, providing entertainment for those members whose exploration of the Yorkshire Dales in particular, still allows for the delight of finding pastures new.

#### ABERDEENSHIRE

Travelling east of Ballater in December, Jim Salvona discovered that 'Picts Cave', marked on the OS maps, is in fact a souterrain.

#### ARGYLL

An investigation of fissures on Sgurr a'Choinnich at Lochgoilhead in October revealed several interesting sites, some of which appear to need approximately 20 metres of ladder.

In Glen Duror, some work was achieved at Albion Pot and the surface dig above Draught Caledonian during November but in January, four members complied with the landowner's wishes and capped both digs. However, after placing bolts in Hibernian Hole an extension was explored to a point where running water could be heard. Hopes of entering the Duror 'master-cave' are high. John Crae had a look at Fiddler's Cave near Gourock in December, finding hard standing now reaches right up to the entrance.

Derek Pettiglio and Walter Fairnie, walking on Beinn Dubhcraig and Ben Oss in January, saw an intriguing hole which is probably the Subway or Klingon Finger Cave, first explored in 1992. In the same month, George Kennedy visited Uamh nan Claig-ionn and several other caves in southern Glenstockdale. An attempt to trace Turnalt Cave nearer Oban failed, although some sinkholes indicated underground activity.

He returned to the area in February for a descent of Uamh Coire Sheileach and Chamber Pot - not finding a way on from the main chamber in the latter, possibly due to a recent collapse.

#### BERWICKSHIRE

In December, Jim Salvona took a look at the Elba Mines, finding some of them still accessible.

#### BUCKINGHAMSHIRE

Whilst on a visit to Windsor in September, Goon managed a tour of the artificial Hellfire Caves at High Wycombe, said to have been the result of an 18th century job creation scheme.

#### CLACKMANNANSHIRE

Goon made a preliminary examination of the Alva Silver Mines in November and was suitably depressed by

the hysterical use of warning signs and barriers over all the entrances. Heavy tree growth since his last visit (1964!) has profoundly changed the landscape.

## COUNTY CLARE

Fraser Simpson, Simon Brooks and Graham Marshall carried out trips in Pollnagollum and Cullaun II during a conference visit in October.

## INVERNESS-SHIRE

Work on Skye has been consistent of late with Richard Simpson and David Morrison living in the area, and several new caves have been found. (See this issue).

In late September, Ivan Young and Peter Ireson installed lighting and CCTV cameras down High Pasture Cave in connection with archaeological work being undertaken. There was also trips into Beinn an Dubhaich Cave and High Pasture Pots. Much caving in November led to an examination of caves near Ord and some re-examination of caves at Kishorn, including the flooded mines, explored for some 200 metres.

## MIDLOTHIAN

A brick-lined ammunition tunnel was passed by John Crae on the Island of Inchcolm in October.

## PERTSHIRE

October witnessed Jim Salvona dragging Derek Pettiglio and Walter Fairnie up Ben Tuillaichean to examine a number of fissure caves near the summit. Some interesting little descents were achieved.

To aid the re-vamp of 'Caves of Schiehallion' there was a trip in December to GPS all the Foss caves. Top Dig had collapsed but was cleared and explored.

In January, Andy Peggie explored a railway tunnel in Crieff, accessed through a manhole in a supermarket carpark! A 10 metre shaft led to 96 metres of damp tunnel.

February saw more work on Scheihallion as the Lassintullich caves were GPSd. Uamh Tom na Fuine could not be found but a new sink was partially cleared by Pete Ireson and Mark Lonnen. After the delights of Via Diarrohea in Lassintullich I they cleaned off in the U-Boat.

## SOUTH WALES

Bob Batty and partner (Mike Barnes) have been digging a swallet in South Wales and in October made a breakthrough. The new site, called Heaven's Door, lies near Llygad Lllwchwr. Sixty metres of cave were explored to sumps, subsequently dived into huge underwater passage. At the farthest point reached the floor is ascending and promises to lead to the elusive master cave for the area. Bob claims the cave as a GSG find.

## SUTHERLAND

In early October a practice rescue took place in Allt nan Uamh Stream Cave following which six members removed 70 loads from Rana Hole and the next day they continued to dig below BBC Pitch. There was also another trip into ANUS Cave. Mid October saw a family visit to ANUS Cave.

A party of seven beavered away in Rana on 10th December, removing 175 skiploads with more than 30 left at the bottom of the main shaft. Depth of Rana is now 31 metres. Over New Year a second ladder was

installed on BBC Pitch and the first two days of 2006 were spent making good progress with two hours hauling after nightfall! Simultaneously there were visits to ANUS Cave, Bone Caves and Cnoc nan Uamh. Dan Harries, Lewis Press and Fiona Ware resurveyed Elphin Hole.

Later in January there was more work in Rana Hole and tourist trips to Whingeing Dog Dig and Storm Cave.

In February, more scaffold fittings were installed in Rana and 180 loads of spoil removed.

## WEST LOTHIAN

In mid-February, Goon and Julie Hesketh took a newcomer on a through trip from holes 3-4 in Bowden Hill Mine and fired off many photographs.

## YORKSHIRE

In September a group of three members elected to 'do' the caves of Birkwith, marking up trips into Birkwith Cave, Old Ing, Red Moss Pot and Calf Holes to Browgill Cave. Three weeks later, two of the team accompanied by Julie Hesketh descended Tatham Wife Hole (located by GPS, taking all the fun out of moor bashing!) as far as the sump, returning to the road through a Yorkshire mist.

At the end of October, the club dinner allowed a party of seventeen to explore the far reaches of White Scar Cave. Simultaneously, there was a trip to Great Aven in KMC, nine members bottomed Bull Pot of the Witches and Jim Salvona poked about in Skirwith Cave and walked over Newby Moss. The following day those sober enough (some 14 or so) carried out an exploration of Notts 2 (Committee Pot) enlivened by a mild flood while underground. Three others went down Lancaster Hole to round off a very successful and busy weekend.

In November there was a return to Newby Moss for a full descent of Long Kin West and Pillar Holes. The following day the various cavers swapped caves and a breakaway group did a through trip down Yordas Pot.

Early December (being the weekend nearest his birthday), Goon held a pensioner celebration in the Dales. A party of ten went down Ireby Fell Cavern armed only with ladders but a temporary flood dampened enthusiasm so the trip only reached the head of Well Pitch. The next day, overnight rain diverted the club from Tatty Wife and instead there were enjoyable (and wet) trips through Calf Holes to Browgill Cave and Old Ing Cave.

The first trip of the New Year was to Aquamole Pot, a party of five all down and three to the bottom. February saw a combined GSG/EUG (a Border-based group) team dropping Jingling Pot via the Cleft route and a partial descent of Aquamole Pot again. The following day Bull Pot Kingsdale was descended in wet conditions. February also saw trips into Wilson's Cave and Long Churn as far as Alum Pot, and a solo visit to Ireby Fell Cavern. During the weekend, three members attended a P-hanger placement course and are now qualified to fix bits of metal all over Scotland.

At the beginning of March, four members carried out a pleasant descent of Marble Steps Pot, and followed it the next day with an exploration of Illusion Pot, East Kingsdale.

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## GLEN DUROR:

Due to forthcoming changes in landowner, members are requested *not* to open or excavate surface features in Glen Duror above (ie outside) the Forestry Commission fence. If/when this situation is resolved, work will continue to trace the main stream course from sink points at and near Albion Pot.

## ADDITIONS TO THE LIBRARY (to 4.3.06)

1. BOOKS:

- Patrick, K.(2004) Pennsylvania Caves and Other Roadside Wonders  
 Harker, G.R. (1995) The Mammoth Incident (adult novel)  
 De Geest, P. (Ed) (2005) Socotra Karst Project 2000-2004  
 Laumanns, M. *et al* (2001) Speleological Project Ghar Alisadr Berliner Höhlenkundliche Berichte, Band 4  
 Laumanns, M. *et al* (2004) The Caves of Rwanda. Berliner Höhlenkundliche Berichte, Band 11  
 Laumanns, M. *et al* (2005) The Caves of Rwanda, Supplement 1. B.H.B. Band 15  
 Arshadi, S. & M. Laumanns (2004) Speleological Project Ghar Katalahkhor. B.H.B. Band 12  
 Laumanns, M. (2005) Atlas of the Great Caves and the Karst of Africa. B.H.B. Band 17  
 Raeisi, E. & M. Laumanns (2003) Iran Cave Directory.B.H.B. Band 10

3. CAVING JOURNALS:

- |  |   |
|--|---|
| Bolton Speleo. Club, Newsletter                | Nos. 2,4,5,7,8 (1962-64)  |
| Bristol Exploration Club, Belfry Bulletin      | No. 523 (2005)  |
| BCRA Transactions, 'Cave & Karst Science       | Vol. 31 No.3 (2004)   |
| BCRA Bull. 'Speleology'                        | No.5 (2005)   |
| British Caver                                  | Vol. 128 (2006)   |
| British Caving Association, Newsletter         | No.5 (2005)   |
| Canadian Caver                                 | No. 63 (2005)   |
| Cave Diving Group, Newsletter                  | Nos. 157,158 (2005-6)   |
| Cave Radio & Electronics Group Journal         | Nos. 61,62 (2005)   |
| Chelsea Speleological Society, Newsletter      | Vol. 47 Nos. 8/9,10,11,12<br>Vol. 48 Nos.1,2 (2005-6)           |
| Craven Pothole Club, Record                    | Nos.80 + Index 51-80,81 (2005-6)                                |
| Croydon Caving Club, 'Pelobates'               | No. 85 (2005)   |
| Derbyshire Caver                               | No. 123 (2005)  |
| Descent  | Nos. 186,187,188 (2005-6)                                       |
| Lancashire Caving and Climbing Club, Journal   | Vol.3 No.1 (1963)   |
| Leeds Univ. Trogs Society, Newsletter          | Nos. 1,2 (1966(?)-1967)   |
| Mountain Rescue Committee of Scotland 'Casbag' | No.9 (2005)   |
| NAMHO Interim Newsletter                       | Dec-Jan (2005-6)  |
| NSS of the USA, News                           | Vol. 62 Nos.5,8,9,10,11,12<br>Vol. 63 Nos. 2,3,4,5,6,7 (2004-5) |
| NSS, Journal of Cave and Karst Science         | Vol. 62 Nos. 2,3 (2000)   |
| Norsk Grotteblad                               | No. 45 (2005)   |
| Red Rose Cave & Pothole Club Newsletter        | Vol.42 No.2 (2005)  |
| Shepton Mallet Caving Club, Journal            | Series 11 Nos.6,7,8 (2005)                                      |
| South Wales Caving Club, Newsletter            | Nos. 45,47,48,49,124 (1963-2005)                                |
| Speleologia. Italian Speleo. Society           | Year 26 No.52 (2005)  |
| SWETCC N/L 'Speleo'                            | Vol.1 Nos. 1,2<br>Vol. 3 Nos.1,2/3<br>Vol. 16 No.1(1962-81)     |
| SWETCC Handbook                                | Occ Publ. No.2 (1966)   |
| Subterranea Britannica, 'Subterranea'          | Nos.8,9 (2005)  |
| Subterranea Croatica                           | Year 4 No.3 (2005)  |

Swiss Speleological Society, 'Stalactite'	Year 53 No.2
	Year 54 Nos. 1,2 (2003-4)
Sydney Speleological Society, Journal	Vol. 49 Nos. 8,9,11,12
	Vol. 50 Nos.1,2 (2005-6)
Univ. Bristol Speleological Society, Newsletter	Third Series No.1 (2005)
Univ. Bristol Speleological Society, Proceedings	Vol. 23 No.3 (2005)
Wessex Cave Club, Journal	Nos. 297,298 (2005-6)
Westminster Spelaeo. Group, Newsletter	No. 4/2005
	No. 1/2006

## 5. CAVE GUIDES, ABSTRACTS ETC.:

- Beck, H. (2005) Going to Pot. O.E. Magazine, pp. 66-68. No. 997
- Irwin, D. (2005) Cave Rescue. Mendip Times No.3, p.36 No. 998
- Irwin, D. (2005) The Banwell Caves. Mendip Times No.4, p.37. No. 999
- Abstract: Ritchie, J.G. (no date) Historical Sketch of Cove House and King Robert the Bruce's Cave, Kirkpatrick-Fleming, Dumfriesshire. pp 15. No. 1000
- Abstract: Moorhouse, S. (1946) Exploring Sea Caves. Boy's Own Paper Vol. 68 No.11 pp 12-14. No. 1001
- Mehew, R. (2005) Staffa Expedition 2005 (Lecture Notes) No. 1002
- Jarratt, A.R. (2005) Staffa Caving Log. No. 1003
- Thompson, R. (2005) The Miner's Tale. Mendip Times No.5, p. 31.
- Irwin, D. (2005) Hidden Earth. Mendip Times No.5, p.36. No. 1004
- Abstract: Klimchouk, A. (2005) The Call of the Abyss Project. Reporter, Leica Geosystems Magazine, pp 6-7. No. 1005
- Abstract: Anker, L. (2002) The Mining Area of the Great Copper Mountain in Falun. World Heritage Sites in Sweden, pp. 99-109. No. 1006
- Abstract: Hetherington, D.A., T.C. Lord & R.M. Jacobi (2005) New Evidence for the Occurrence of Eurasian Lynx (*Lynx Lynx*) in Medieval Britain. Journal of Quaternary Science (in press) pp5. No.1007
- Hodgson, D.G. (2005) Scoska Cave. 100 Years of Moths. Craven Pothole Club. No. 1008
- Sarradet, M. & P. Fanlac (1977) Font-de-Gaume en Perigord. Speleological Abstracts 42-43 (for 2003-4) + CD Rom (2005)
- The Paths for All Partnership. Annual Review for 2004-5 (2005) No. 1009
- Abstract: The Alva Silver Mine. S. Moreton. The Mineralogical Record Vol.27 (Nov-Dec) (1996) pp 405-413. No. 1010
- CRO: Rescues of 2004. (2005) No. 1011
- Abstract: Irwin, D. (2005) Chase a Rabbit and Find a Cave (Aveline's Hole). Mendip Times No.6, p.34 No. 1012
- Abstract: Brodick Castle Clamp-kiln and the Lime Industry of Arran. D. Alexander. History Scotland Vol. 6 No.1 (Jan/Feb 2005)pp 17-21. No. 1013

## 6. CDs, VIDEOS ETC

- Photographs, Rescue Practice, Uamh Duilean Briste, Argyll  
Staffa Images (2005)
- Speleological Union of Ireland: Pesteria/Cave (2005)
- The Caves of Scotland, Bibl/The Remaining Caves of Scotland/Caves of Northern Britain (Oldham)(2005)
- DVD: Wookey Exposed. A Film by Gaving Newman (2005)

## VALE: JOHN CORNWALL

Older members will be saddened to hear of the passing from a heart attack of John Cornwall in the last days of January 2006, variously a BEC and WCC member. He was thought to be 73-ish. Butch recalls first encountering him in the old Wessex hut at Hillgrove when he stoked the stove with his bare hands. We both remember him regularly down Swildon's in a swimming costume. He was a Cuthbert's leader and I remember him on one of my early trips just after the introduction of wetsuits when we had 1/8" thick neoprene and John had 1/4" causing him to overheat and tear his off at the Great Gour and wallow in it to cool down. I think he even carried the suit most of the way out. At that time he was manager of a Co-op store.

John was an accomplished photographer - see the stunning self portrait of him passing the duck in St Cuthbert's on the front cover of the first issue of The Speleologist, January 1965. Subsequently he turned then to mining and accumulated a formidable library of material relating to primarily South Wales and the Bristol coal fields. He published several mining books much in demand and well received. He married Jenny Murrell from the former Miners Arms.

In more recent years with Mike Thompson they ran a business doing mining searches but eventually parted to go their separate ways.

M.T. Mills.

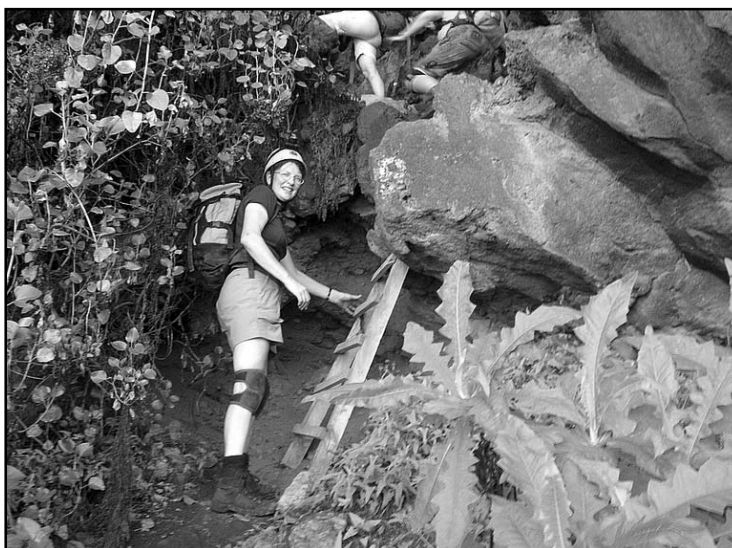
## VISIT TO LA CUEVA DE SAN MARCOS, TENERIFE

By Bob Jones

A group of GSG members visited Tenerife for a week in November with the principal aims of escaping the Scottish winter, doing some walking and testing Julian's theories on the availability of cheap, drinkable wine.

The chance to visit large lava tubes was too good to miss and although it wasn't possible to arrange entry to the largest lava tube on the island (La Cueva del Viento) the party did visit La Cueva de San Marcos. The cave, which branches into two principal galleries, comprises 1.8km of mainly walking passage. There is a second, gated and locked, entrance in the middle of a banana plantation. Features not familiar from Scottish caving include irrigation from the plantation seeping into the cave and banana roots growing across the passage floor.

The most difficult aspect of the visit proved to be finding the entrance which is in a cliff 80m above the beach. To reach the cave you have to find the correct point to leave a concrete lane, descend a rickety ladder, walk along the parapet of a water cistern and then climb another makeshift ladder. A separate, smaller cave could be entered by a more rickety ladder. Overall the trip provided a couple of hours good entertainment sandwiched between a swim in the sea and an ice cream back on the beach. Maybe La Cueva del Viento will be possible next time.



Present: Bob and Rosemary Jones, Alison Jones, Julian and Carol Walford, Mary Harrison.

## Grid References (UTM)

Access from lane 28R 0331184 3140156 (height 78m)

Cave Entrance 28R 0331152 3140142 (height 81m)

Small Cave Entrance 28R 0331069 3140142 (height 77m)

## SCOTLAND'S FIRST CAVE BOOK

by Martin Mills

I have taken some care in choosing this title. I have purposely refrained from including earliest, for who knows... I could have safely included rarest as will become apparent. I have chosen cave instead of caving as it is about the caves.

My first encounter with the aquatints of William Daniell will have been in the late 1970s when Kirsty's parents and relatives in Caithness had them hanging on their walls. In the early 1980s, winters commuting by train to Glasgow enabled me by saving my meagre allowances to save a few pounds. John Smith's Bookshop in St Vincent Street was visited and at that time it had an antiquarian department on the top floor which had a selection of Daniell prints. It was here that I first came across and purchased that of "Entrance to the Cave of Smowe", a cave already familiar to me. The next winter it was a print of "Unapool in Kyles-cu, Afsynt", dominated by the dark mass of Quinag.

Subsequently I have also acquired the four editions to date of Donald B McCulloch's guidebook to Staffa under its various titles (see Refs 1-4 below). In the preface to the first edition of 1927 (fortunately the preface of each preceding edition is included in subsequent ones) there is this interesting comment:

A few books contain a brief reference to the subject, but no single book has been found devoted wholly to Staffa, with the exception of a series of nine coloured Aquatint views drawn by William Daniell, A.R.A., which, along with a brief description of Staffa, were bound together and published in 1818 at the price of £2. 0s 0d per volume. Copies of this publication are now very scarce.

If it was very scarce in 1927, it is now exceedingly elusive to the extent that I don't expect to ever hear of a copy for sale. However it did provide a quest!

William Daniell, R.A. (1769-1837) had undertaken a "Voyage Round Great Britain" beginning at Land's End in 1813; he was in the North West Highlands in the summer of 1818 and made it back to Land's End in 1823. Initially he was accompanied by a companion, Richard Ayton, who was to provide the text to accompany his illustrations, but who dropped out at Kirkcudbright in 1816. The Daniell family lived at Chertsey in Surrey and it was William's uncle Thomas who gave him instruction in painting and engraving. In 1784 Thomas was granted permission by the East India Company to work in India and to take William with him as his assistant (then aged 15). For nine years they travelled extensively, recording many scenes and upon their return started work on their "Oriental Scenery" in six volumes with 144 coloured aquatints.

"Voyage Round Great Britain" was published between 1814 and 1825 in 8 volumes with a total of 308 aquatints. The text for the first two volumes was provided by Ayton, the remainder by Daniell. Many of the volumes were broken up to provide the aquatints individually. All the drawings Daniell produced were to the size 237mm horizontal by 165mm vertical, and hand coloured by trade colourists from Daniell's notes.

In 1972 the Tate Gallery acquired Daniell's original copper plates and in 1978 a limited edition of the engravings was published (see ref.5 below) accompanied by the complete text with illustrations in two volumes. Daniell was elected an Associate of the Royal Academy in 1807, and full Academician in 1822.

It has to be said that Daniell's aquatints are generally faithful reproductions of their scenes. At times Daniell foreshortens a view of the foreground, thereby accentuating the height of background mountains. On 2nd June 1988 (see ref. 6 below) I took my copy of "Entrance to the Cave of Smowe", engraved in 1820, to the cave and confirmed this, except that it is with the tide in and enlivened by people and boats. The only dif-

ference is the small building on the right at the foot of the approach path. Although roofless, it has a hipped roof, whereas the one in Daniell's is further from the cave entrance beyond the present winch, and a lean-to up against a small rock face with an opening at its foot.

Between 1995 and 1997, North of Scotland Newspapers, The Northern Times and The Orcadian respectively produced calendars featuring 12 of Daniell's aquatints (see refs 7 - 8), that for 1996 (ref.8) including Smowe Cave (September) and Whitenhead, Loch Eribol, which shows caves (December). Unfortunately to the writer's knowledge these calendars were not continued further down the NW coast.

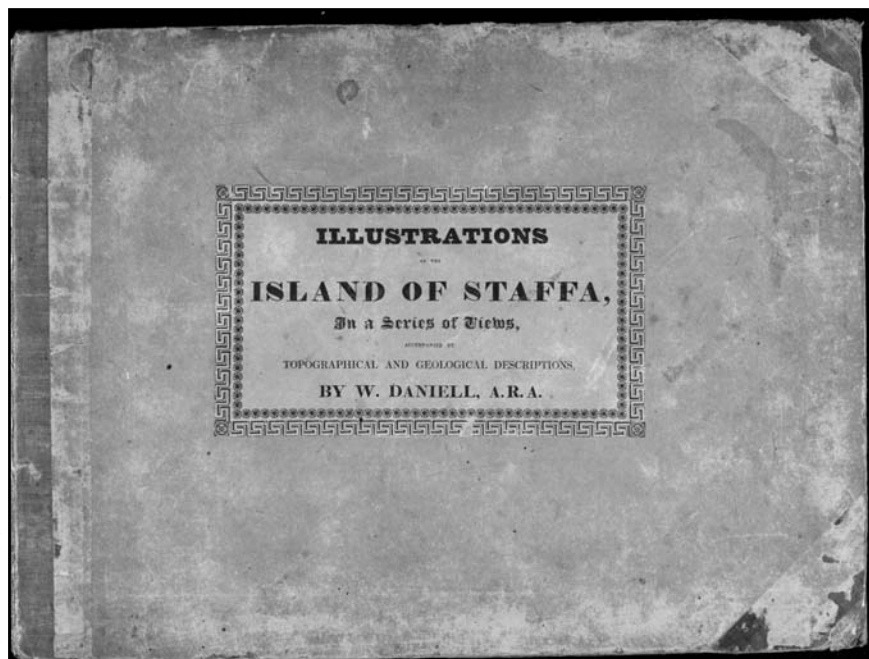
Starting at the same time and running in parallel but altogether a greater undertaking there has been a different approach. Between 1988 and 2002 the painter David Addey has repeated Daniell's journey, visited most of his original locations for his aquatints, sketched many and undertaken modern watercolours of a considerable number. These have been published opposite Daniell's aquatints (reproduced in black and white only), in four volumes between 1995 and 2002, but only volume 3 (ref. 9) is relevant to this article. This includes Staffa from the South West (illus.6); Fingal's Cave, Staffa (view outwards) (illus.7); Smowe Cave (illus.14); and Whiten Head, Loch Eribol (illus.43). Volume 4 reveals that William Daniell completed 577 watercolours and drawings on his "Voyage Round Great Britain" but many were withdrawn and not published.

As I have previously commented following my visit on 31st May 1993, (see ref. 11) Fingal's Cave must be the most famous, least visited cave in the world (well until this summer at least!). Having discovered that William Daniell had produced a separate book containing his aquatints, the quest was on. A copy was found in the National Library of Scotland, George IV Bridge, Edinburgh. There would also appear to be another copy in the British Library in London, according to their catalogue. Its description corresponds to that in NLS. I wonder how many other copies still exist?

Reproduced here is the front cover. Its size is oblong folio 270mm high x 375mm wide. It comprises a preliminary and main title page, then 11 pages of text [1], 2-11 numbered and on the back of p11 it states in two lines

"T DAVISON, LOMBARD STRETT/  
WHITEFRIARS, LONDON", confirming the printer.

The title page states "ILLUSTRATIONS / OF / THE ISLAND OF STAFFA / IN A SERIES OF VIEWS / ACCOMPANIED BY / TOPOGRAPHICAL AND GEOLOGICAL DESCRIPTIONS / BY W. DANIELL, A.R.A. / LONDON / PRINTED BY THOMAS DAVISON, WHITEFRIARS, / FOR LONGMAN, HURST, REES, ORME AND BROWN, PATERNOSTER ROW; AND WILLIAM DANIELL / NO. 9 CLEVELAND STREET, FITZROY SQUARE / 1818"



The text differs from that in "Voyage Round Great Britain" vol. 3, pp 35 - 48, text by William Daniell, relating to Staffa.

Then appear 9 aquatints in this order:

Entrance to Fingal's Cave, Staffa - 20

The Island of Staffa from the South West - 26

The Island of Staffa from the South East - 25  
 View from the Island of Staffa - 24  
 The Fingal's Cave, Staffa - 21  
 Exterior of Fingal's Cave, Staffa -19  
 The Cormorant's Cave, Staffa - 23  
 Staffa near Fingal's Cave - 22  
 Clam-shell Cave, Staffa. Iona in the distance - 18

The numbers after the list of aquatints appear at the end of the second line after the date of publishing at the foot and outside the frame of the aquatints, and corresponds to the order in which they appear in "Voyage Round Great Britain".

The only remaining question was why did Daniell choose to produce this separate book? Presumably demand or anticipated demand from the increasing number of tourists visiting Staffa and Fingal's Cave in particular.

----oOo----

### **References**

1. MACCULLOCH, Donald B. 1927. The Island of Staffa. Glasgow: Alex Maclaren & Sons. 64pp, 12 photos. 2 plans (plan view of Fingal's Cave and elevation of entrance, both not drawn to scale). 1 map.
  2. *Ibid* 1934. Second Edition. The Wondrous Isle of Staffa: Its History, Geology, Features and Associations. Glasgow. Alex Maclaren & Sons. x[+iii] + 195pp. 13 photos, 7 illustrations, 2 plans. 1 map.
  3. *Ibid* 1957. Third Edition. Title as 2 above. Edinburgh, Oliver and Boyd. xviii + 205pp, 17 photos, 3 illustrations, 1 map.
  4. *Ibid* 1975. Fourth Edition. Staffa. Newton Abbott: David & Charles (in The Islands Series) © Alastair de Watteville. xix + 194 + vii pp. 20 photos, 5 illustrations, 1 map.
  5. DANIELL, William and AYTON, Richard. 1977. A Voyage Round Great Britain. London: Tate Gallery Publications Dept. 2 volumes.
  6. M[ILLS], M.T. 1988. The Desecration of the Great Cave of Smoo. SMCC Nltr. 25,(4),66-67 (Sept).
  7. North of Scotland Newspapers, Wick. "Voyage Round Caithness 1995 Calendar".
  8. The Northern Times. "The Sutherland Calendar 1996".
  9. The Orcadian, Kirkwall. "Voyage Around Orkney 1977 Calendar".
  10. ADDEY, David. 2000. A Voyage Round Great Britain: volume 3, The Highlands and Islands of Scotland. Staplehurst: Spellmount Ltd.
1. M[ILLS], M.T. 1993. A Visit to the most famous but least visited cave in the world. SMCC Nltr. 30,(5 & 6), 45-47 (Xmas). Also in GSG Bull. Third Series, Vol.3 No.1, p. 9-12 (March 1994).

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## SCOTTISH CAVE RESCUE - AN UPDATE

By Alan L. Jeffreys



Some time has elapsed since the last summary <sup>(1)</sup> mainly because of Scotland's largely incident-free record but ironically, 2005 has turned out to be an unusually busy year.

As is customary, two practices were held, one in Argyll in May with a complete evacuation of a stretchered casualty from the far reaches of Uamh Duilean Bhriste and the other in October in partnership with Assynt Mountain Rescue down Allt nan Uamh Stream Cave where a variety of situations were addressed simultaneously. On top of all this, a first aid course was provided and representatives attended the British Cave Rescue Council Conference at Priddy (where they even won the light-hearted rescue race!).

Despite all the training, when actual incidents come along they are invariably unpredictable, as in August when a call was received from Lothian and Borders Police for assistance at a large scale search operation around Livingston, West Lothian. An 11-year old schoolboy had gone missing and several underground features identified within the search area. A nine-strong team spent two days checking abandoned mines, canal culverts and old sewers before the incident elevated to a murder inquiry following the discovery of the boy's body in woods within the town.



A real cave incident - albeit a low key one - occurred in October when a female member of Dundee University took a fall at the climb down to 2nd Stream Chamber in Allt nan Uamh Stream Cave, injuring her ankle. Fortuitously, this was the same weekend as the SCRO practice and the shout was actually received during the debrief! Winning a race up-valley, cave rescue members were able to assist the casualty up the entrance series to daylight where MR personnel carried her down to the car park for transport to Raigmore Hospital. (The ankle later turned out to have a cracked bone). This is probably the most efficient Scottish call-out on record.

**Rescue race at Priddy, July 2005.**

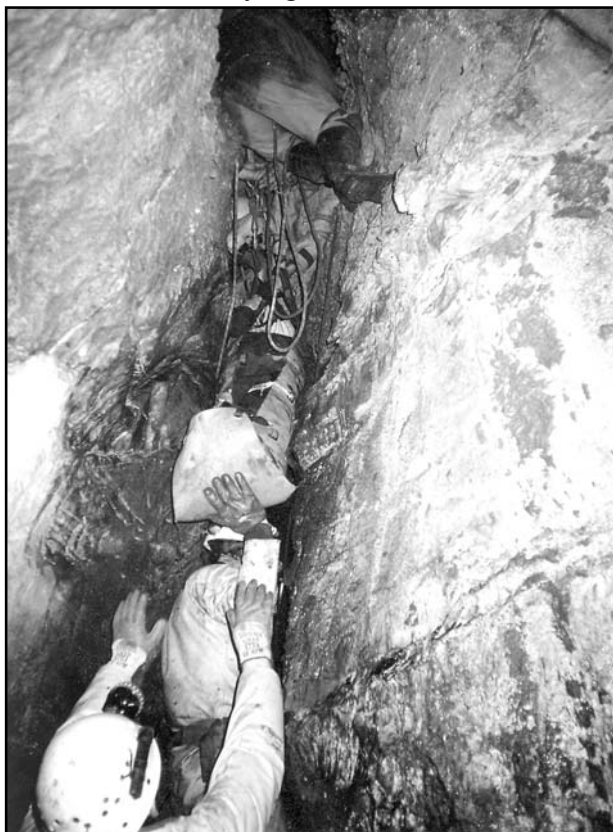
**l-r: A. Mendus, R. Galloway, A. Audslic, D. Warren (casualty), P. Dennis, M. Brown.**

**Photo: A. Jeffreys**

Just as the year drew to an end and everyone had relaxed into the festive season, another alert came from Lothian and Borders Police, *again* in Livingston, on Christmas Eve yet! Once more there was a missing schoolboy who failed to return home (when his dog did) but fortunately the scare was happily resolved before anyone was required to turn out.

While of course there is absolutely no desire to wish anyone grief underground, it cannot be denied that real incidents re-inforce training and encourage those who persevere at thankless practices year after year. Scotland has an extremely low cave accident record, because of course caving here truly is a minority pursuit, but that in no way mitigates against being prepared.

On the administrative front, there has been constant activity liaising with the Scottish Mountain Rescue Committee and carrying out discussions with the local Police authority to establish a sound financial future for an organisation with responsibility for the whole of Scotland - and that includes thousands of islands!



To promote our 'corporate presence', the committee have been deliberating for some years on the creation of an effective and recognisable logo. In 2005 the task of resolving this dilemma was handed over to Mark Lonnen who produced a variety of designs, from which the logo heading up this report was eventually chosen. It comprises a thistle, abseiling caver and titles in navy blue, with a green first aid cross within the circle.

Late in 2005 there was a change of Secretary. Peter Dennis stood down due to domestic and professional pressures after a very effective term of office. The post has been filled by Dave Warren who will doubtless bring his customary energy and enthusiasm to developing a little-used but essential resource in Scotland.

(1) Jeffreys, A.L. (1997) Some Recent Cave Accident Incidents. Bull. GSG 3rd Series 4(3) p.21.

**Left: The casualty is lowered down the pitch, Uamh Duilean Bhriste, Argyll, May 2005. Photo: A. Jeffreys**

## MEET REPORT:

## TWO PYRENEAN CAVES

By Peter Reynolds.

Last December Ann and I spent some time in the eastern Pyrenees, staying north of Foix. We intended to go skiing and walking, but were also aware that there were a lot of show caves in the area - most of them closed at that time of year. A visit to a local sports shop supplied maps and a walking guide which, rather to our surprise, included two caving trips. Naturally we could not ignore the chance of a bit of underground exploration despite our lack of gear - we only had climbing helmets and two Petzl head torches.

We set off for the first cave - encouragingly called "La Grotte de l'Homme Mort" - in light snow, trudging up muddy forest tracks and a section steep enough to need wire protection, until we arrived at the foot of three short sections of wobbly metal ladder bolted to the cliff face. A metre wide hole at the top led into a large decorated chamber but beyond this the floor dipped down very steeply, and as Ann had not made it up the ladders and my light was not very efficient, exploration stopped at that point. The guide book suggests a length of 200 metres with gour pools and a 'cascade stalagmitique' further in.

The second cave - "La Grotte de Sabart" - is situated on the outskirts of Tarascon, in a cliff behind a large scrapyard. The main difficulties in the approach as recommended in the guide book were large pieces of metal and vicious vegetation. At first it looks as if the cave is going to be an enormous rock shelter, but passing through this (avoiding climbers dangling from the roof) there is a smaller entrance beyond. After a short stooping section the cave opens up into a series of passages containing a variety of decorations culminating in pillars 8-10 metres high. Our dim lights only revealed small facets of the decoration, but we were able to walk to the end of the main series. On the way back we followed a much better path (not in the guide book) which led to a locked metal gate near the scrapyard. Climbing round this we found we had parked right next to it. Other walks in the area went past a number of features of speleological interest including a rock shelter used by the resistance in World War II and a spectacular shakehole, equipped with a viewing platform - the "Trou des Corbeaux". Various other grottes and gouffres are marked on the map.

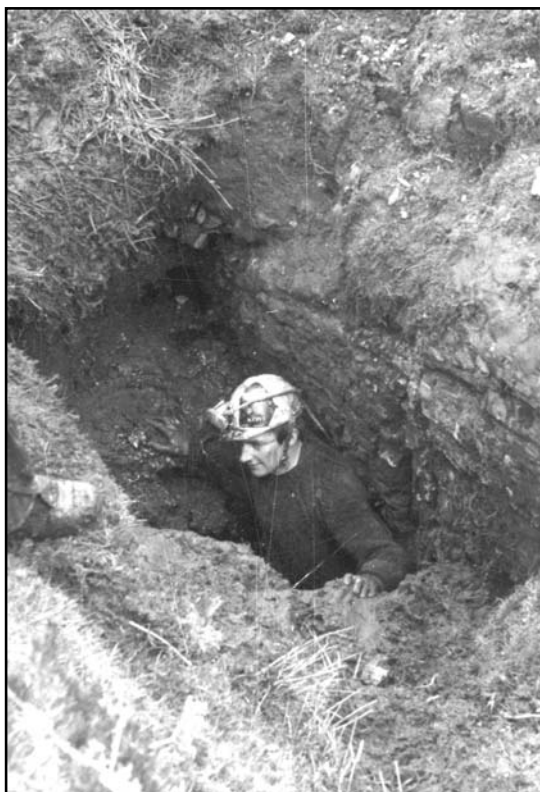
Next time we go we'll take better lights.

**Reference:** JOLFRE, Jacques (2002) Randonnees en pays Cathare. Rando Editions.

## A SURVEY OF ELPHIN HOLE

Caves in the Knockan area of Sutherland tend to be short. The fragmented nature of disturbed Eilean Dubh limestones lying behind the G.S.G. hut is compounded by a klippe of Cambrian quartzite and proximity to the Moine Thrust Plane, which delimits access to limestones on the eastern flanks of Druim Poll Eoghainn. Nevertheless, caves do exist, principally as swallow holes along the thrust boundary.

Elphin Hole was discovered on 21st May 1966 by Roddy Owens, Eric Glen, Murdoch MacLeod and Norman Marsh after an hour or two's digging at the bottom of a scooped depression taking a small dribble, upslope roughly to the west of Uamh Poll Eoghainn.



**Murdoch MacLeod, Discoverer of Elphin Hole, in the entrance during surveying trip, September 1966.**

**Photo: Norman Marsh**

A grade three survey was published in July 1966,<sup>(1)</sup> drawn by Peter MacNab and this was followed in September by another, claimed to be grade four, conducted by the discoverers joined by Jim Peddie, Brian and Peter Reid, the latter drawing up the survey.<sup>(2)</sup> On both plans, a 17 metre entrance shaft was claimed which is a trifle optimistic (it is actually a maximum of 10 metres, all of it free-climbable), but otherwise gave a reasonable indication of the cave's character. Contemporary exploration covered the whole system and effectively no extensions have been added during the intervening forty years, despite several attempts to pass the terminal sump - even using explosives (as was the case with BSA Manchester Group in 1966). The sump was re-examined in May 1997 by Simon Brooks who discovered a descending rift, followed for some 10 metres to a depth of 2.5 metres. An arch on the left indicated a way on which was not attempted due to the diver wearing a single breathing set.<sup>(3)</sup> Between dives there has been a marked variation in water levels, hence underwater extensions are not indicated on the survey.

In December 2005 the decision was taken to re-survey the cave to a Grade 5b standard, and this was duly carried out by Dan Harries (book), Fiona Ware (instruments) and Lewis Press (tape). Passage detail was recorded to scale and corrected for orientation directly onto 1mm graph paper within the cave. Since

Elphin Hole appears to be developed along a single joint, its ground plan is fairly simple until the morphology is disturbed by a thrust fault just before the sump. In this vicinity there are outcrops of small calcite formations and some instability. The survey was drawn up and manipulated in Paint Shop Pro by Dan Harries. Grid references and NGR were provided by Ivan Young. Following a number of GPS readings in Assynt which highlighted the need for some complex corrections it should be accepted that these hand-held GPS figures are to +/- 5m horizontally and +/- 8-10m in altitude.

ALJ

References:

(1) Glen, Eric (1966) Elphin Hole. Bull. GSG 1st Series 3(1) pp 13-15.

(2) Jeffreys, Alan L. (1967) Recent Work in the Knockan Region of Sutherland.

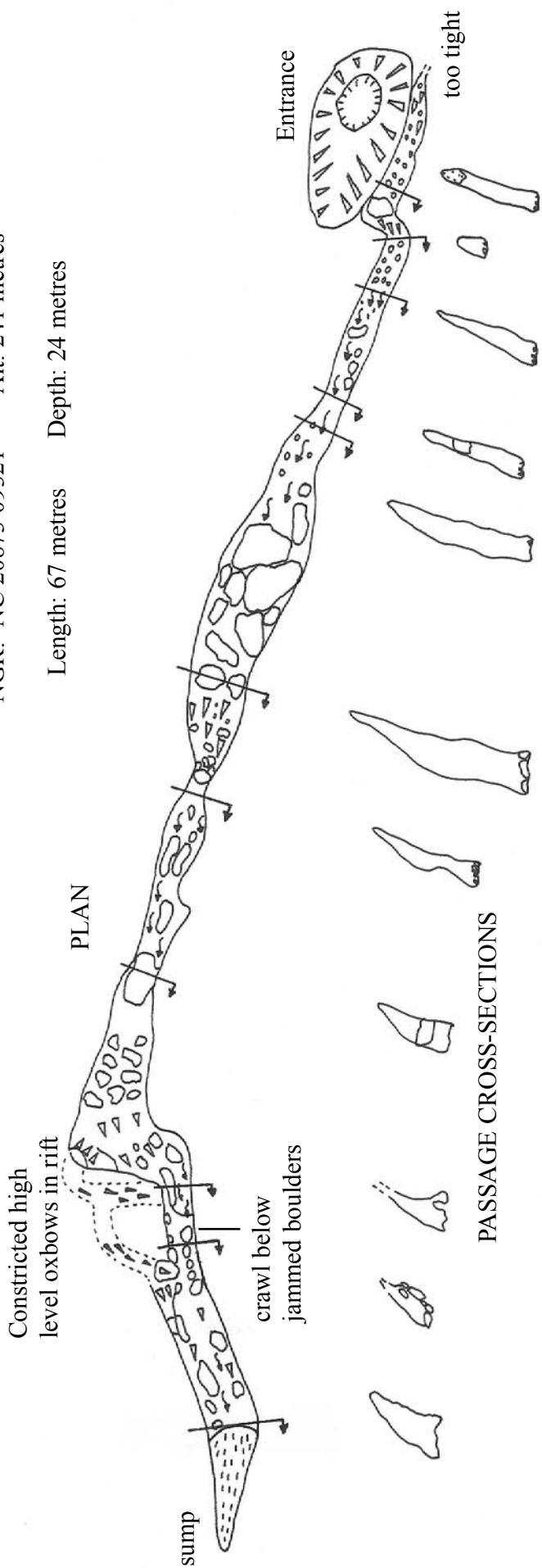
BSA Journal VI(41) pp 30-33 [*This is the only published version of Pete Reid's sheet survey, which exists as a dyeline copy in the club records.*]

(3) Brooks, Simon J. (1997) Dive Reports: Elphin Hole. CDG Newsletter No.124, pp 34-35.

### ELPHIN HOLE

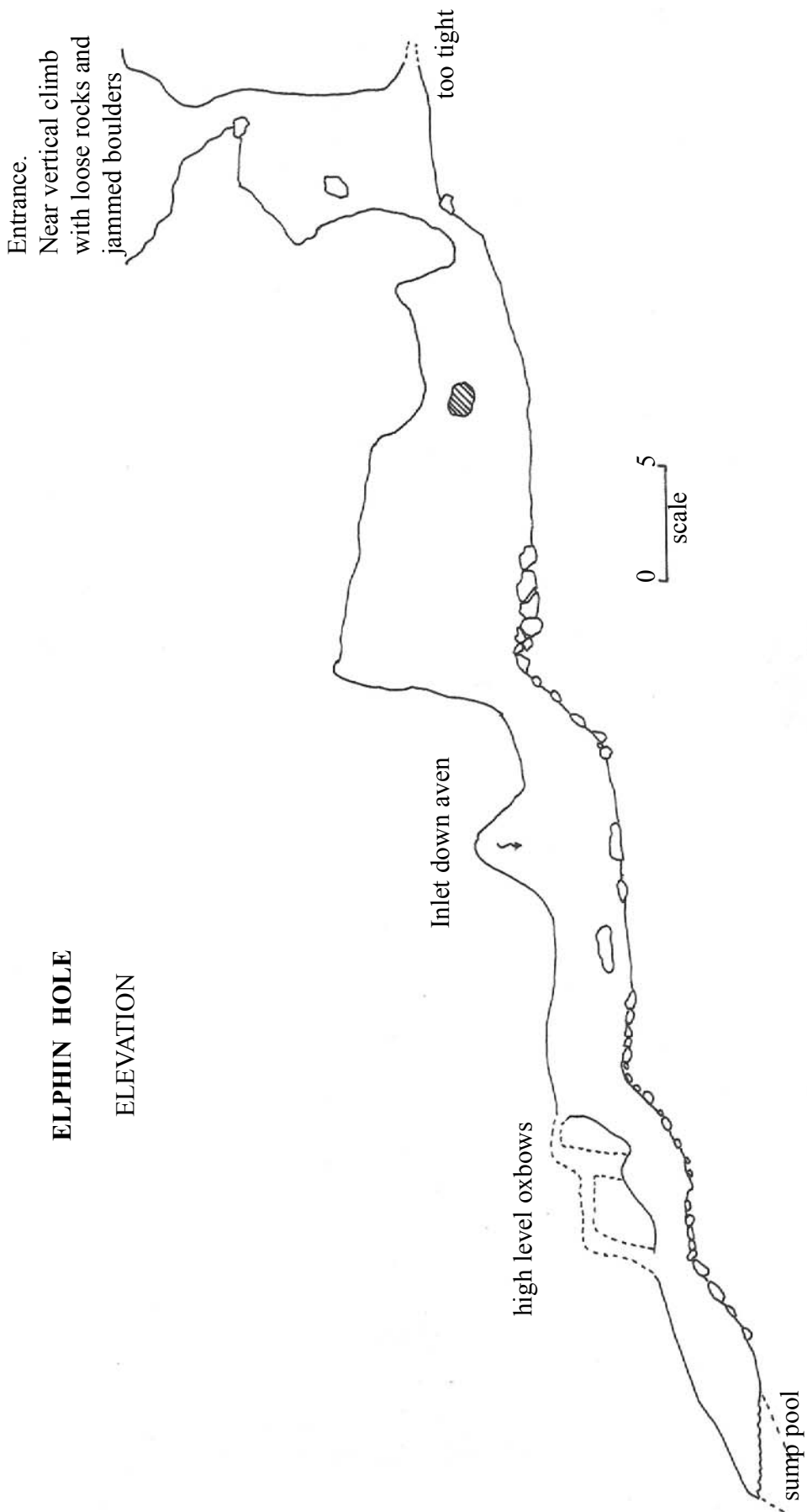
Druim Poll Eoghainn Sutherland  
NGR: NC 20873 09321 Alt. 241 metres

Length: 67 metres Depth: 24 metres



Survey, BCRA Grade 5b  
by Dan Harries, Fiona Ware and  
Lewis Press, Dec. 2005.

Drawn by Dan Harries

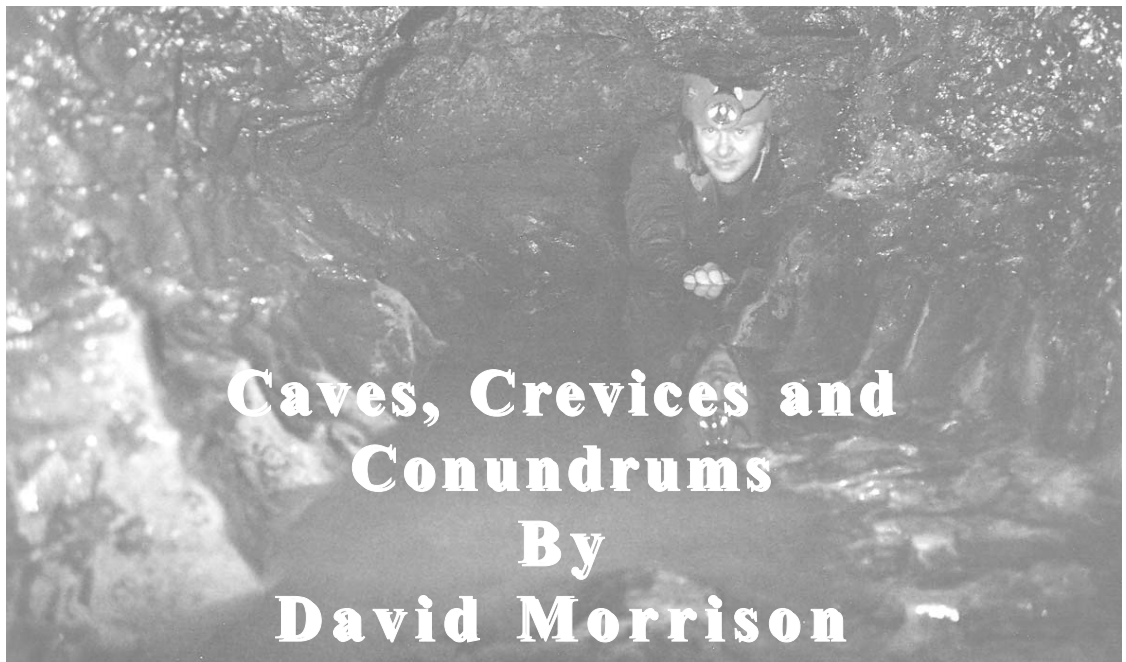


**ELPHIN HOLE**

ELEVATION

**Richard Simpson in  
The Tube, Meekons  
Cave, Skye.**

**Photo. D. Morrison**



The following text is a collection of notes, reports, descriptions and surveys of various sites in Skye, Kishorn and Applecross. The new caves found are quite small, but they all add to the great jigsaw, and finding something new, however small it turns out to be, is always exciting.

One or two of the surveys and descriptions in “Caves of Skye” (C.o.S.) are not 100% accurate and this can be a bit confusing at times. Hopefully more activity in the area will iron out these discrepancies. The survey for Allt na Pairte Cave (C.o.S. p.56) does not seem to fit the farthest passages after the pebble columns. The stream passage gradually lowers to a tight flat out crawl - helmet off, cheek in water - for about four metres, then it opens into walking size rift passage. This continues, now stooping height, for five or six metres with abundant formations, then goes flat out for an unknown distance. In the right wall of the passage are two holes, one just big enough to enter. Both lead to a small, heavily decorated chamber. This is shown to be much bigger on the survey and was not entered for fear of damaging the formations when turning to exit. It seems strange that the section of rift passage is not mentioned as it is so different from the passage up and downstream. Also, there is one large and impressive formation about halfway along. Any information about the original survey would be most helpful.

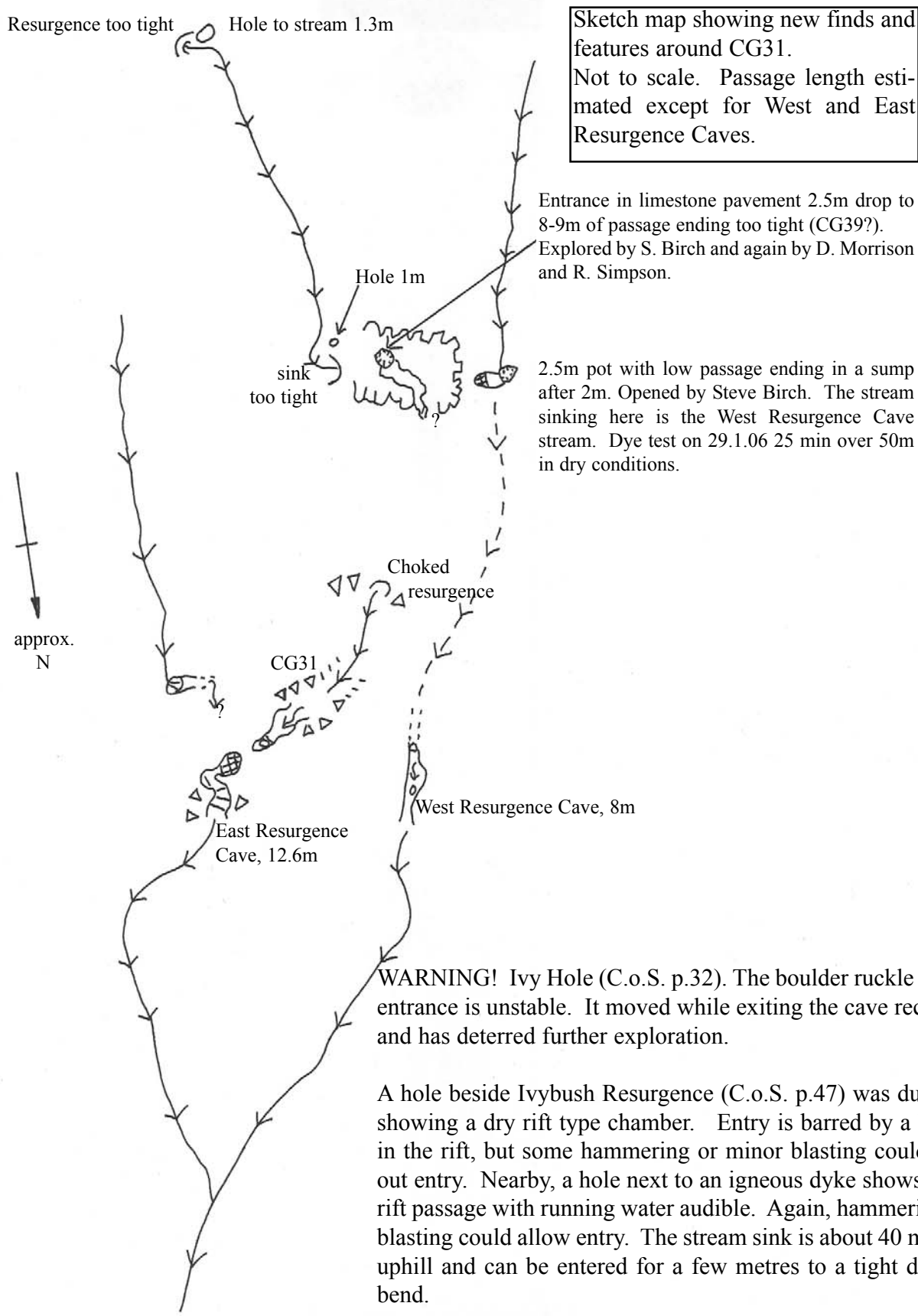
Just upstream from the entrance to Wildcat Cave (C.o.S. p.58) there is a sink in the true left bank of the Allt na Pairte. This was dug out until stopped by solid rock (boot sized hole taking a lot of water). There is quite a rumble on the surface and it can also be heard at the end of Wildcat Cave.

In the Coille Gaireallach woods a number of new caves have been found along with other caves and openings noted by Steve Birch but not yet reported. First is a list of new caves: High Pasture Pot 3; Mushroom Cave; Dry Cave; Tiny Pot; West Resurgence Cave and East Resurgence Cave. Descriptions and surveys for some of these are included in this report.

Three caves previously found but not yet reported are Pavement Pot, West Resurgence Sink Cave and a small sink cave just east of CG31. A sketch map overleaf shows the approximate positions of these caves and their companions.

Some notes now on caves already reported in this area: Sheep’s Head Cave (C.o.S. p.46) is slightly more complex at the entrance and has small dry passage from the ‘end’, above the stream. The streamway also shows more passage when low and could possibly be pushed. This is a good sporting cave. Entrance CG25 (C.o.S. p.42) is now a through trip and has been for at least a year. No known widening has been done.

Cave of the Murre (GSG Bull 3rd Series 5(4)p.58) has been dug and four or five metres of passage gained. More is visible and is being dug out sporadically.



Sketch map showing new finds and features around CG31.  
Not to scale. Passage length estimated except for West and East Resurgence Caves.

Entrance in limestone pavement 2.5m drop to 8-9m of passage ending too tight (CG39?).  
Explored by S. Birch and again by D. Morrison and R. Simpson.

2.5m pot with low passage ending in a sump after 2m. Opened by Steve Birch. The stream sinking here is the West Resurgence Cave stream. Dye test on 29.1.06 25 min over 50m in dry conditions.

WARNING! Ivy Hole (C.o.S. p.32). The boulder ruckle at the entrance is unstable. It moved while exiting the cave recently and has deterred further exploration.

A hole beside Ivybush Resurgence (C.o.S. p.47) was dug out showing a dry rift type chamber. Entry is barred by a bulge in the rift, but some hammering or minor blasting could sort out entry. Nearby, a hole next to an igneous dyke shows high rift passage with running water audible. Again, hammering or blasting could allow entry. The stream sink is about 40 metres uphill and can be entered for a few metres to a tight double bend.

Moving to Torrin: in Bulletin 4th Series 2(3) it was reported that a large boulder was blocking the entrance to Boulder Pot (C.o.S. p.58). This has been removed and the remains form a low wall with a rough fence around the entrance. This should hopefully deter any wandering sheep. Vampire Cave (C.o.S.p.66) has been

toured. A little hammering in places to blunt some projections was done but it is still tight and jagged.

Heading up the Allt nan Leac a visit to Mudslide Cave (C.o.S.p.22) found the small chamber beyond the eye-holes to be half full of water and tighter than its description. It is best to go feet first on your belly.

Chris Warwick and Mark Campbell's new cave was explored and is quite sporting. It will probably be named False Willow Cave and will hopefully be surveyed soon. Just above Lower Willowtree Cave (C.o.S.p.22), there is a low granite cliff. At the base of this there are three openings through boulders which lead to various chambers and connecting passage. Some of the boulders are loose and care is needed if visiting here.

At the Allt Aulavaig, only caves 1 and 2 are situated within the gorge (C.o.S.p.55). Cave 3 is more interesting than its description lets on and may have changed slightly. The two remaining caves described were not located on this visit.

Over at Kilchrist in one of the quarries, NGR 619 197, two small caves were noticed within the quarry's walls. They each end too tight after about three metres. Approximately 70 metres to the NE a granite fissure type cave was found. It is about five metres long and ends with a small chamber where a fist sized passage is seen continuing.

On the lower slopes of Ben Suardal a resurgence which sinks into a dry streambed after a few metres was dug into but its narrow sloping passage is too tight to enter. Uphill, heading south from here at approximately 628 208 there is a hole which becomes too tight after a short distance but passage is seen to continue. A hole in its floor shows voids with tight passage beyond.

Some small caves have been found in the Allt an Inbhire area, one of which is thought to be Streamside Cave (C.o.S.p.53). Boulders had to be removed to allow easier access and digging was necessary to gain entry to the main rift passage. A survey and description are included with this report.

Two other caves: Snail Cave, NGR 61095 20120 and Echo Chamber, NGR 611 197 are after a few metres, too tight and too low respectively.

Following a trip into Spar Cave several other sea caves to the north were looked at. Tony Oldham's "New Caves of Scotland" mentions seven of them but there are at least a dozen over a distance of 1 km. The longest is about 70 metres, and with some having nice formations they are worth a visit when the tide is low.

As mentioned in Newsletter No. 125, (Jan 2006), Cave of the Kings has been extended by approximately five metres and looks like it will repay further digging. The mines also mentioned have been sketch surveyed and the passages in mine 2 have been measured to a total of 135 metres, which is a little less than first estimated. They are certainly worth a visit, especially mine 2 which has cave pearls and many small straw stalactites but be aware of fragile mineral deposits on parts of the floor.



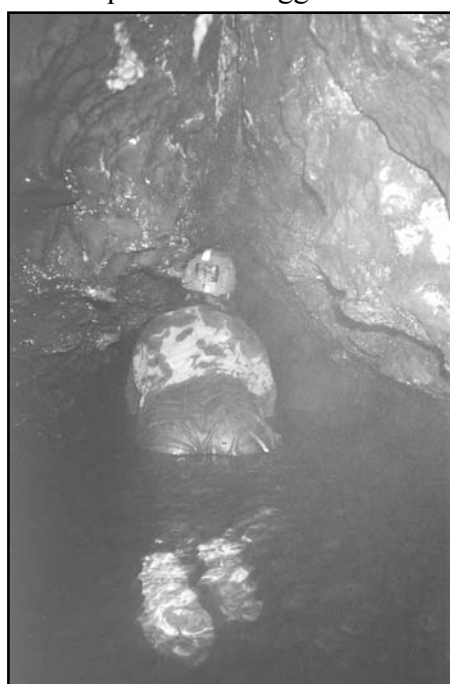
**Richard Simpson exiting Hartfield Cave, Applecross  
Photo: D. Morrison**

Hartfield Cave at Applecross, NGR 7215 4699, has been found (again) and is on the opposite side of the burn

(west) than shown on the 1:25000 map. The cave has been used as a tip and is full of old shoes, boots, bicycles, bottles, paraffin containers, dead animals (dog and sheep bones) and many other unidentifiable objects apart from a chamber pot. (There's always a chamber pot! - Ed.) Two old bedsteads provide a novel ladder which aids entry and exit to the cave, but take care if you go through the boulders at the bottom as they do not look very stable. Allegedly many years ago illegitimate babies were disposed of in this vicinity, and some older residents don't like to talk about the caves.

On a lighter note, the rising noted by Andy Trafford, GSG Bull. 2nd Series 3(1)p.34, NGR 725 453, was dug into and revealed itself to be too tight after two metres but a good echo can be heard beyond the tightening. Its sink has yet to be found.

Still at Applecross, and the two caves near Cave of the Liar which are also mentioned in Andy Trafford's report have been looked into and the 'not very safe' one is a bit dodgy but could be pushed by someone very keen. In the Cave of the Liar, the squeeze into Straw Chamber seems to have disappeared but the Metal Puzzle squeeze is a bugger!



**Richard in Triangle Passage, Meekons Cave.**

**Photo: D. Morrison**

Back to Skye and some alteration to the original survey for Meekons Cave have been made and a description along with a new survey are provided. Some other finds were made in the Ord area and have been written up by R. Simpson along with a description of the mines at Kishorn.

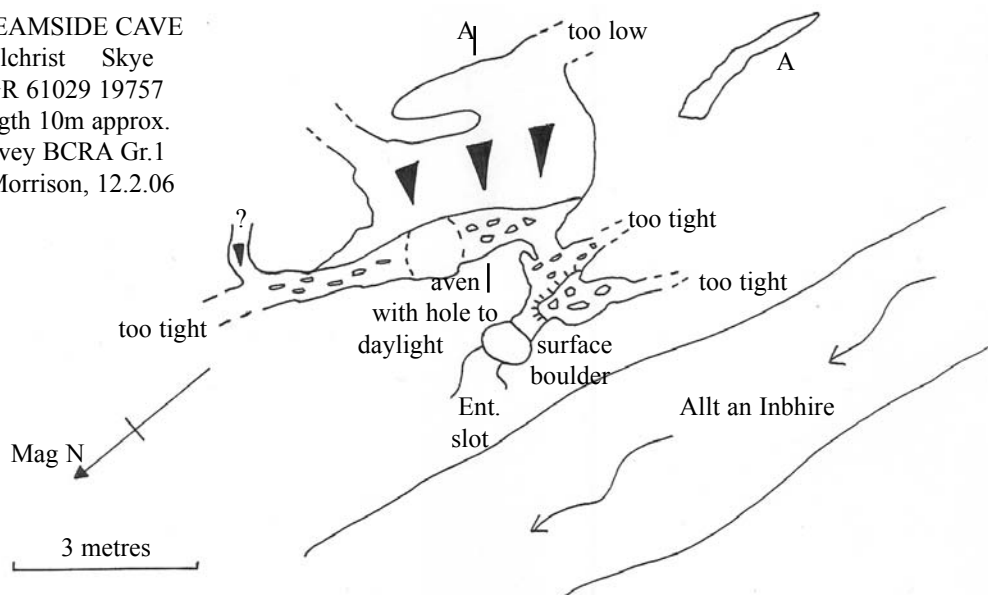
So concludes another article which is still not a complete record of all the new finds. To write up everything that has been found or changed in the Skye area alone would need hours of work. I now have two large folders full of information and surveys for Skye and Kishorn. Hopefully they will be of some use in any future guides to these areas.

Descriptions for a selection of the above caves are as follows:

**Meekons Cave, Heaste, Skye.**

Scramble over blocks into a low chamber. The continuing passage becomes a wet crawl through 0.5m deep water leading to a step and a choice of routes. Turning left and going upstream a tricky duck leads you to the main passage. Downstream heads back towards the entrance and ends at a choke. The main passage continues through the tube which

STREAMSIDE CAVE  
 Kilchrist Skye  
 NGR 61029 19757  
 Length 10m approx.  
 Survey BCRA Gr.1  
 D. Morrison, 12.2.06

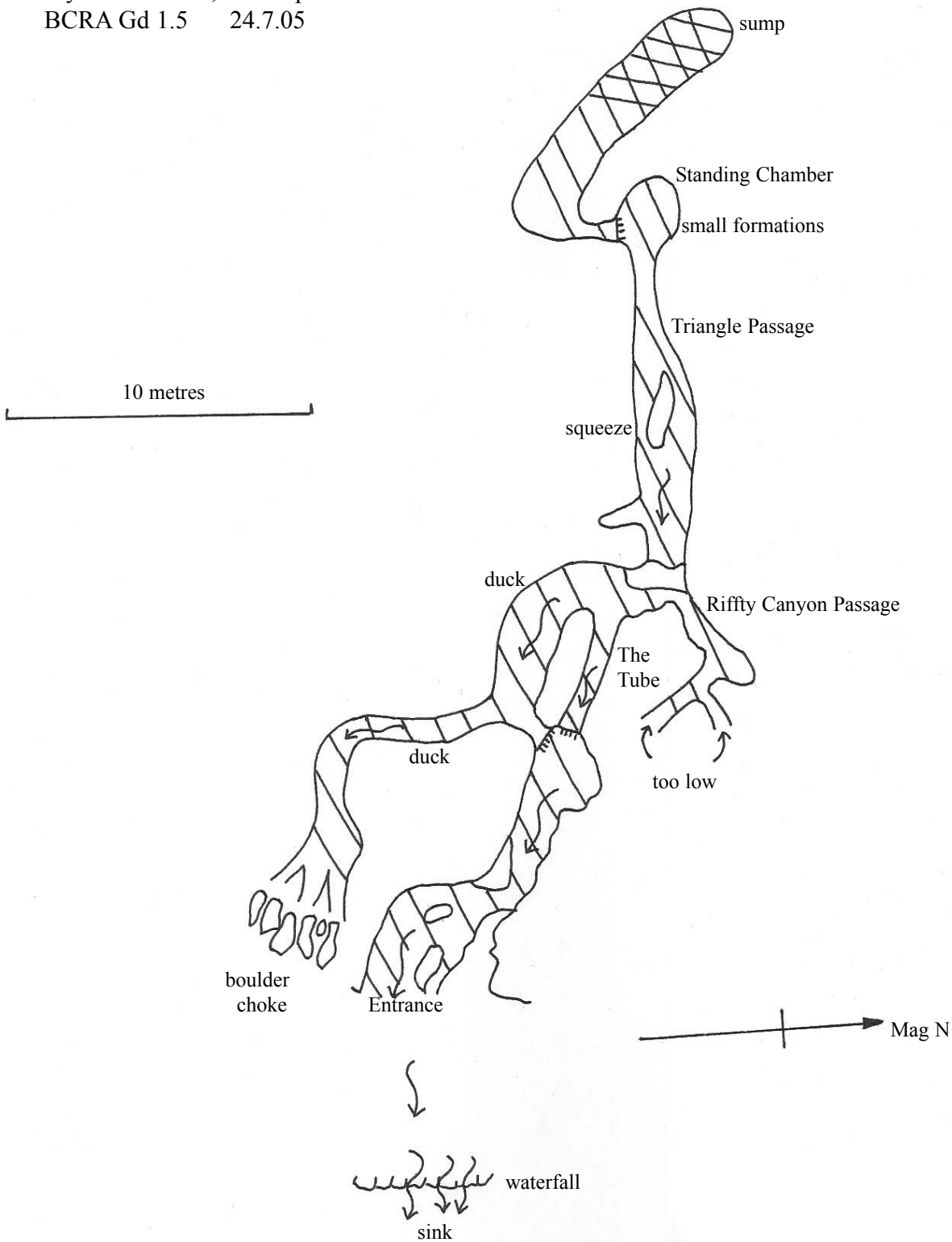


**MEEKONS CAVE**

Heaste Skye  
NGR 66650 19440  
Alt. 125m  
Length 51m

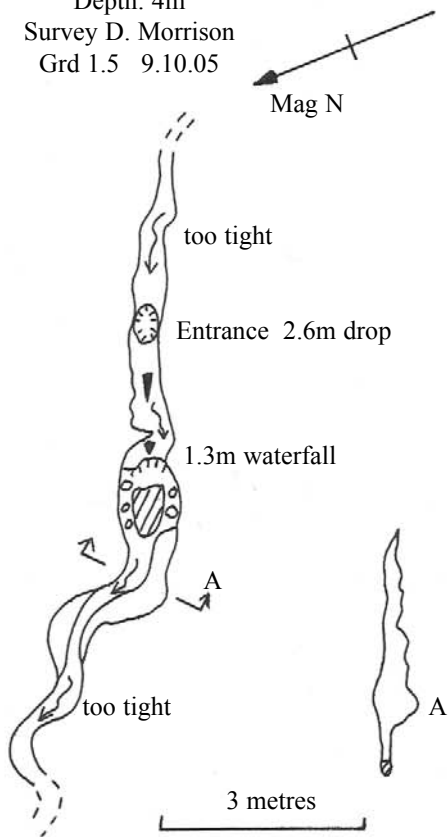
↗ Sink 100m from  
entrance

Survey D. Morrison, R. Simpson  
BCRA Gd 1.5 24.7.05



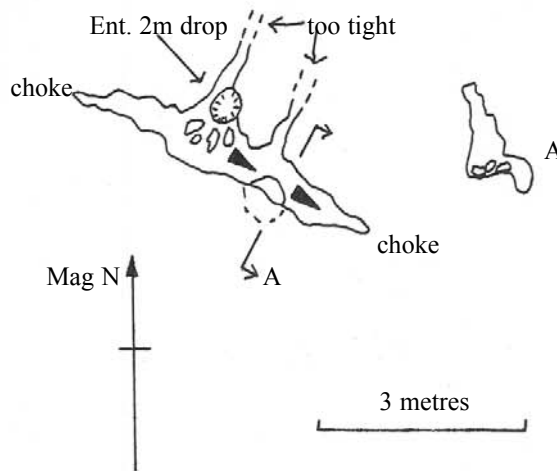
**HIGH PASTURE POT 3**

Coille Gaireallach Skye  
 NGR 59526 19621  
 Alt. 94m  
 Length: 8m  
 Depth: 4m  
 Survey D. Morrison  
 Grd 1.5 9.10.05



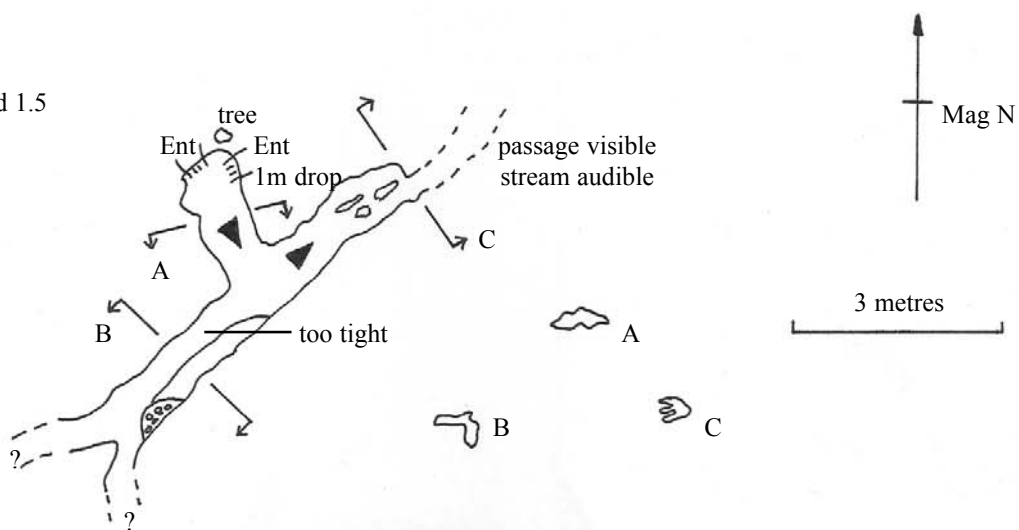
**TINY POT**

Coille Gaireallach Skye  
 NGR 60277 19486  
 Alt. 121m  
 Length: 4m  
 Depth: 3m  
 Survey D. Morrison Gd 1.5  
 23.10.05



**DRY CAVE**

Coille Gaireallach Skye  
 NGR 600 195  
 Alt. 120m  
 Length: 6m  
 Survey D. Morrison Gd 1.5  
 23.10.05



leads to a small chamber with three ways on. Left takes you back to the duck and the parallel passage. Right is Riffy Canyon Passage and its offshoots all ending too tight. The way on continues along Triangle Passage and a squeeze over a 2m boulder leads to Standing Chamber. A step up left leads after a few metres to a sump.

**Note:** The system can only be fully explored in dry conditions.

**Streamside Cave. NGR 61029 19757**

A feet first, sideways wriggle under a boulder leads over a block-shelf to land in a small chamber. Here two small passages end too tight. At floor level a low arch gives access to a large slanting rift about 4m high and 6m long. There is an aven about halfway along this rift and at its end a small passage containing a gin trap heads towards the surface. There are several holes to daylight throughout the system.

**High Pasture Pot 3. NGR 59526 19621**

Enter through a small hole into tight rift passage. Upstream is too tight but shows about 2.5m of passage which becomes narrower. Downstream is a wriggle past a flake and then down a 1.3m waterfall to high rift passage. This has a ledge 1m above the stream which now runs through a narrow channel. The rift becomes too tight after a few metres but continues with tight twists.

**West Resurgence Cave.**

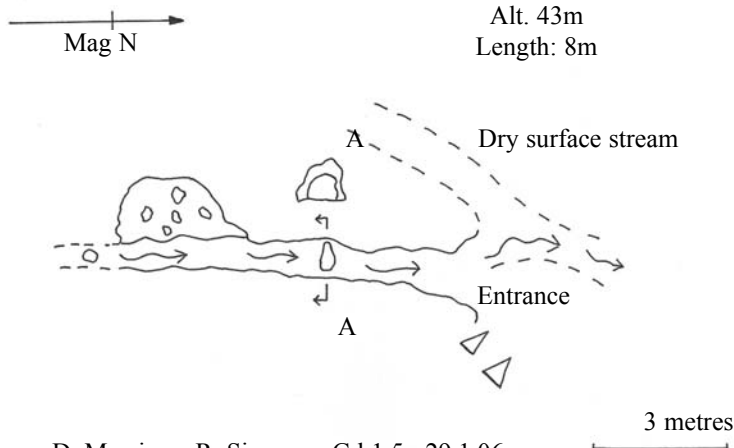
Eight metre crawl to a large boulder; over this to a low wide chamber and continuing small blocked passage. The stream sinks 50m uphill into a 2.5m pot which has 2m of passage ending at a sump. Dye tested 29.1.06, 50m in 25 mins. Dry conditions.

**East Resurgence Cave.**

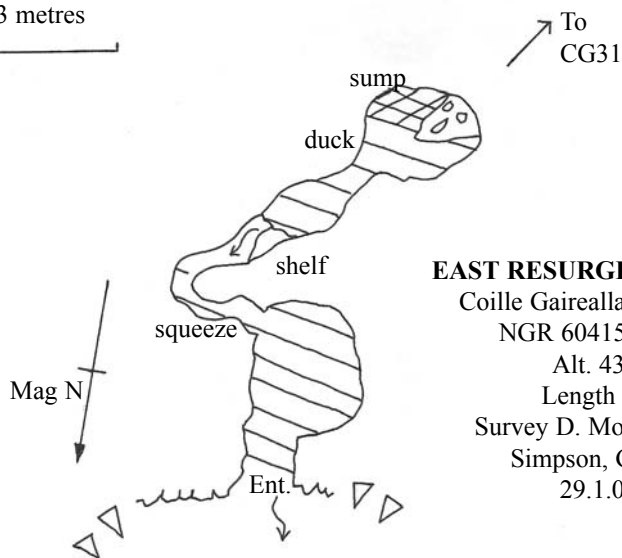
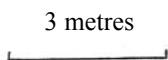
Crawl through a pool to a chamber. Squeeze round an S-bend, still in water, to a small section of stream and another water-filled chamber which appears to sump. In dry conditions this is a duck leading to a 2.5m by 2.5m low chamber which does sump. This is the same water as CG31. Dye tested 29.1.06.

**WEST RESURGENCE CAVE**

Coille Gaireallach Skye  
NGR 60415 19765  
Alt. 43m  
Length: 8m



Survey D. Morrison, R. Simpson, Gd 1.5 29.1.06



**EAST RESURGENCE CAVE**

Coille Gaireallach Skye  
NGR 60415 19765  
Alt. 43m  
Length 8m  
Survey D. Morrison, R.  
Simpson, Gd 1.5  
29.1.06

**Dry Cave.**

A tree straddles the entrance with two holes between the roots. A 1m drop to a small chamber and a slide down a mud slope leads to dry waterworn passage. Left can be followed to a blockage with more passage visible and an audible stream. Right becomes too tight after 1.5m. The small continuing passage forks but no way on seems possible.

**Tiny Pot.**

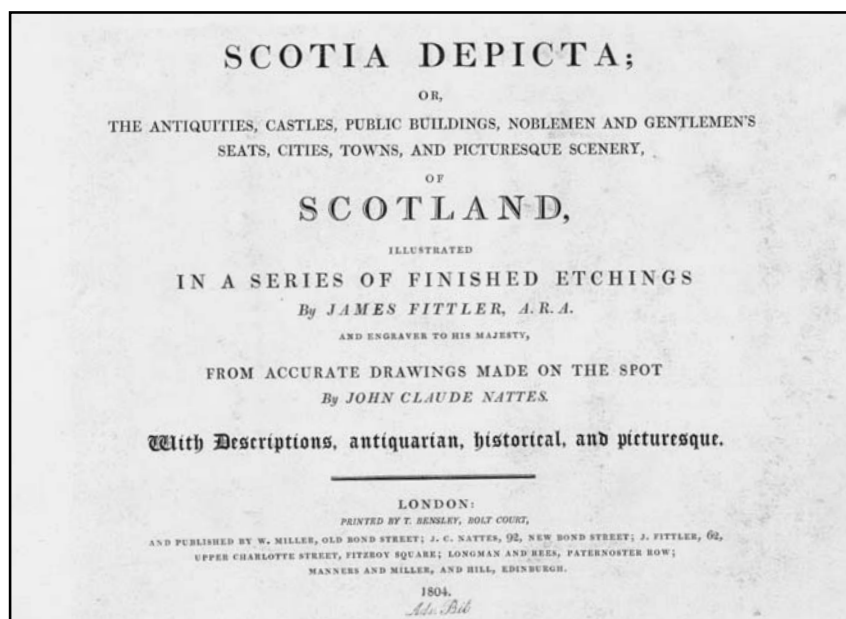
A two metre drop into a small chamber in a jagged rift. Right chokes after 2m. Left descends to a choke after 2.6m and two small passages lead off to the north (downhill), both too tight.

## MORE ABOUT THE CAVERN IN GLEN CRAE/CROE

By Martin Mills

In this Bulletin, Series 2, Vol.4 No.3, p.25 (December 1984), Tony Jarratt wrote a brief article 'Cavern in Glen Croe - A Mystery to be Solved' arising from two antique illustrations he had depicting this cave. Tony's article included a sketch of the larger of the illustrations and suggested it was probably taken from 'Scotia Depicta' - London 1819, and suggested that a look at this work in the National Library of Scotland may solve the mystery.

In the following Bulletin, No.4, p.24 (May 1985) Ivan Young in 'Cavern in Glen Croe - A Mystery Solved?' revealed that Jim Salvona had found the location well down Glen Croe, where the river flows through a narrow gorge just beside the A83 a few miles west of Arrochar, and where a massive rock fall has roofed the gorge for about 60 feet. Jim also observed that the artist must have sketched from memory and used artistic licence to convey his impression of the place. A better idea of scale would be obtained if the height of the figures was increased four or five times.



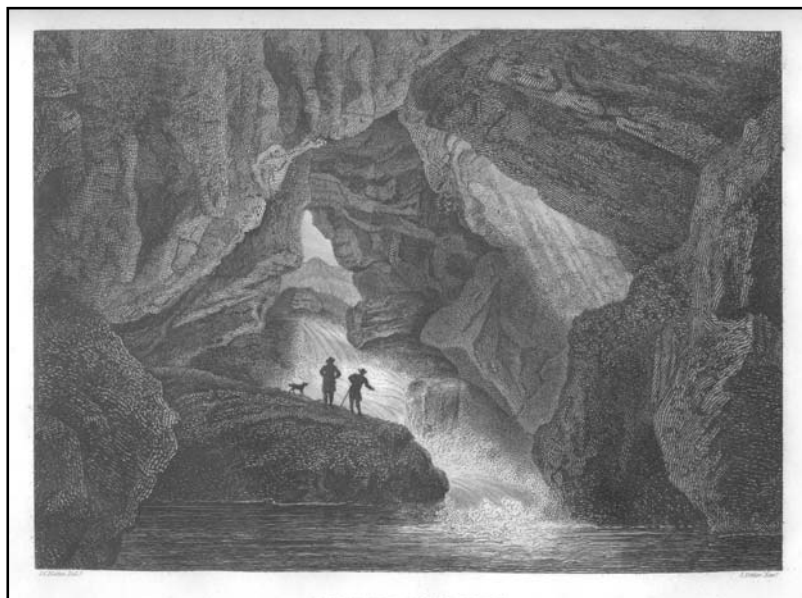
Having myself also acquired the same two antique illustrations as Tony has, in checking which against his I gratefully acknowledge his co-operation, the matter was further complicated when I obtained a duplicate of the smaller illustration this time in black and white rather than coloured. I decided it was time to try and clarify things. Having to go to the National Library of Scotland, George IV Bridge, Edinburgh for another matter reported elsewhere in this Bulletin, I sought out "Scotia Depicta" a mighty tome, page size 273mm horizontal by 415mm vertical.

It contains 48 numbered uncoloured plates together with a frontispiece of a storm lashed Fingal's Cave, Staffa, opposite the title page. Incidentally amongst the 48 numbered plates, plate 17 is of an underground scene in Gilmerton Quarry,<sup>(1)</sup> and plate 26 is a view of the entrance to Fingal's Cave.

However our interest is with plate 29, Cavern in Glen Croe; this is the largest of the two known illustrations.

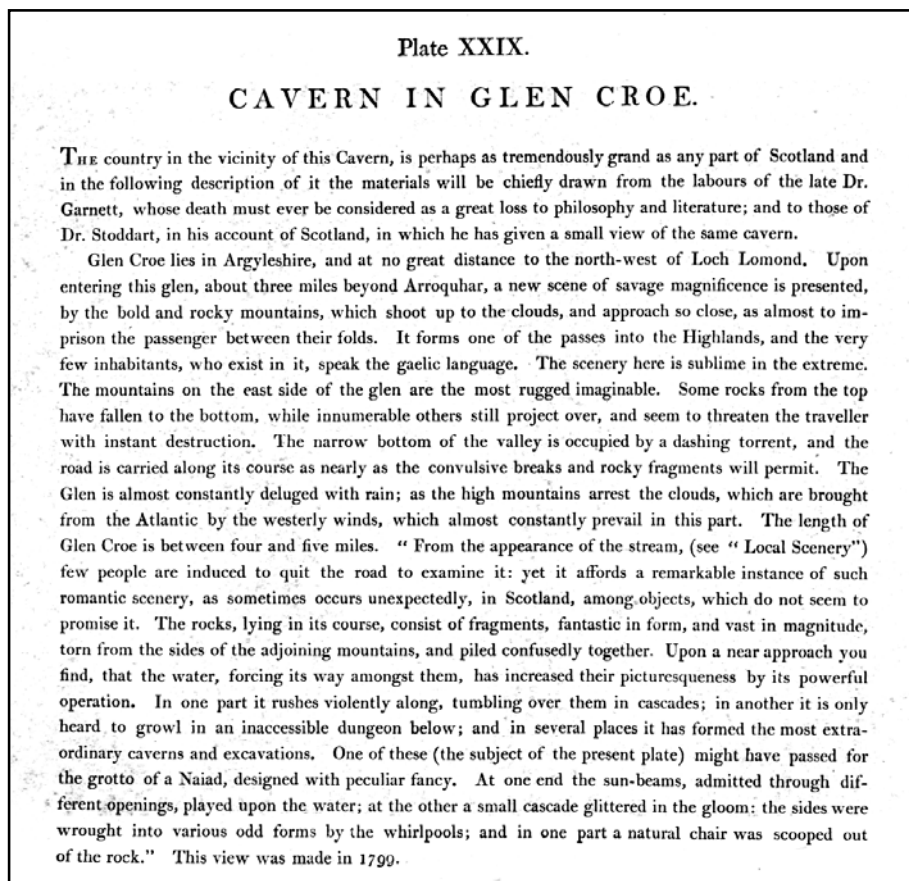
This is reproduced to the right except that both Tony and my separate copies are coloured in the same manner, lightly coloured in blue, green, purple and yellow, the two figures are more deeply coloured in brown and red.

Its true size is 250mm horizontal by 182mm vertical and you will note that the plates are numbered in Arabic numerals whereas the text accompanying descriptions on the opposite page is numbered in Roman numerals.



Beneath the print which is titled 'CAVERN IN GLEN CRAE' in very fine text on the left and right corners respectively it states 'J.C. Nattes Del' and 'J. Fittler Exc.' corresponding to the mention on the title page 'James Fittler A.R.A., engraver, and John Claude Nattes' who made the drawing on the spot.

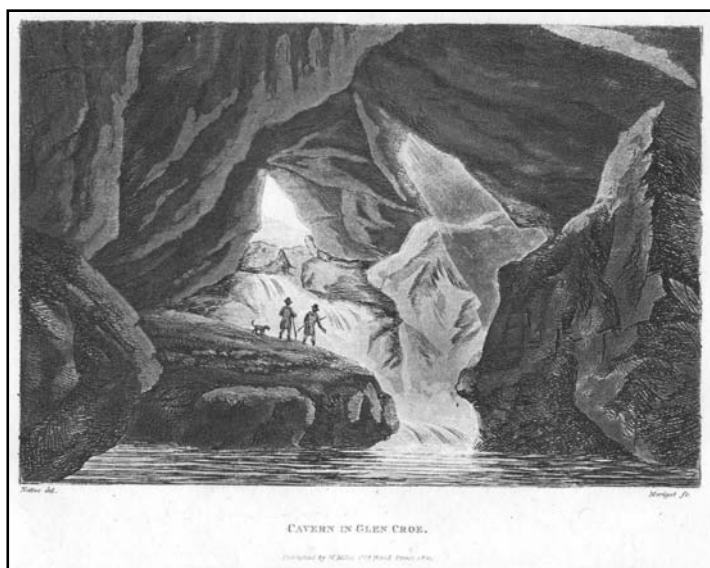
Opposite the plate is a page of text reproduced below:



and which reveals the illustration was made in 1799. This was exactly 50 years after the 44 miles of military road from Dumbarton to Loch Fyne, the route of which was first surveyed by Major Caulfield, General George Wade's Inspector of Roads in 1743. After Culloden work recommenced and by 1746 troops had made the road over the summit of Glen Croe and completed the route to Inveraray the following year, 1749. Thomas Pennant passed along the road in 1769, Samuel Johnson in 1773, and the French scientist Barthélemy Faujas de St Fond in 1784 en route to visit Fingal's Cave, on Staffa, and in 1746 Sarah Murray who wrote a guidebook and manual in two volumes for travellers 'A Companion and Useful Guide to the Beauties of Scotland'.

The smaller illustration to the right is very similar and measures 182mm horizontal by 125mm vertical. Beneath the title 'CAVERN IN GLEN CROE' is stated 'Published by W. Miller, Old Bond Street, 1801.' And beneath the print in very fine text at the left and right corners respectively is stated 'Nattes del' and 'Merigot fc.'

It will be noted that it again features two men and a dog in slightly different poses. The coloured variety I have is deeply coloured in browns and greys and the two figures in blue and brown. Opposite the figures through an opening in the roof a shaft of daylight illuminates the underground scene.



Well one question has been answered but clearly further research is necessary if we are to unravel who first located the cave and how it came to be projected to the importance that two known illustrations have been made of it.

- (1) This quarry is the one responsible for recent council house subsidence in Ferniehill, and was used as an air raid shelter during the war. Ed.

## RADIOLOCATION USING THE HEYPHONE AT HIGH PASTURE CAVE

by Ivan Young

The discovery by archaeologist and GSG member Steve Birch of bone, pottery and other artefacts in High Pasture Cave (ref 1) raised one very important question. Where was the entrance used in prehistory to enter the cave? The present day entrance was dug open in 1972 by UCLSS (ref 3). While it might have been open and used 2000 years ago it wasn't a likely candidate. A far more likely site was at the far end of Bone Passage. Here a pile of boulders - one of which would have made a good lintel - appeared to have spilled out of a hole in the roof to fill the passage beneath..

Correlating the cave survey with the ground above Bone Passage (ref 2) placed this point somewhere in the vicinity of a U-shaped platform and the remains of a roundhouse and other prehistoric structures. The cave survey was produced by the Moldywarps in 1973 to BCRA's Grade 5c so the error over the 50m of passage to that point should be small. Ref 4 has a chart of probable error versus passage length for different grades of survey. The likely error range for 50m of grade five survey is given as 1.2 to 3 metres. This could be an underestimate since Skye is famed for the large number of igneous intrusions and dykes many of which are magnetic, drive compasses astray and make the cave surveyor's task much more difficult. High Pasture Cave is intersected by many dykes so an independent check of the location of the end of Bone Passage was essential.

What we needed was a direct method of locating an underground point on the surface above. The most common technique used is what is usually referred to as 'radiolocation', though radio waves are not involved at all. This method senses the magnetic field set up by an underground loop carrying an oscillating current with another receiving loop on the surface and the technique is more properly described as magnetic induction. The form taken by the magnetic field is well-known and quite predictable provided there are no large areas of conductive rock, wire fences, or metal objects in the vicinity. When the diameter of the above-ground loop is pointing directly towards the horizontal below-ground loop there should be a definite sharp null. A detailed discussion of the method is given in ref 6.

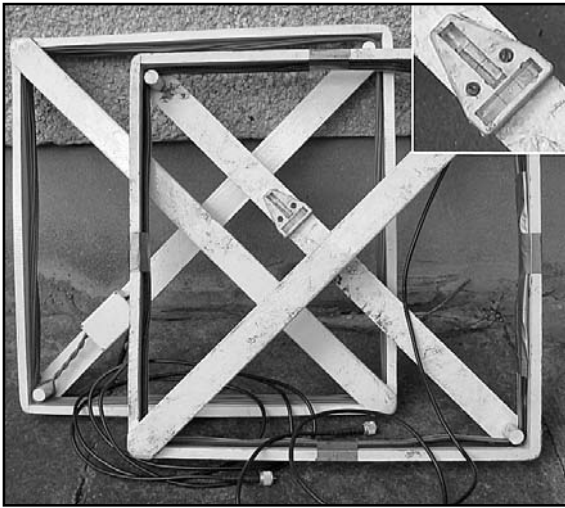
When we were surveying Uamh an Claonaite and the other caves in and under Creag nan Uamh in Assynt we used a borrowed Molephone for 'radiolocating' points in Legless Highway and the Great Northern Time Machine (ref 5). The Molephone was the standard cave radio at the time (1996) and was ideal for the job. The ability of surface and underground teams to talk to each other made co-ordination trivial and we were very confident in the accuracy of the results.

By 2004 the SCRO had bought its own sets of Heyphones, the successor to the Molephone. It was designed by John Hay and a large run were built for UK cave rescue teams. For maximum range it is used with long wire antennas that are connected into the ground at widely separated points. This cannot be used for radiolocation, but the Heyphone can also be used with loop aerials just like the Molephone.

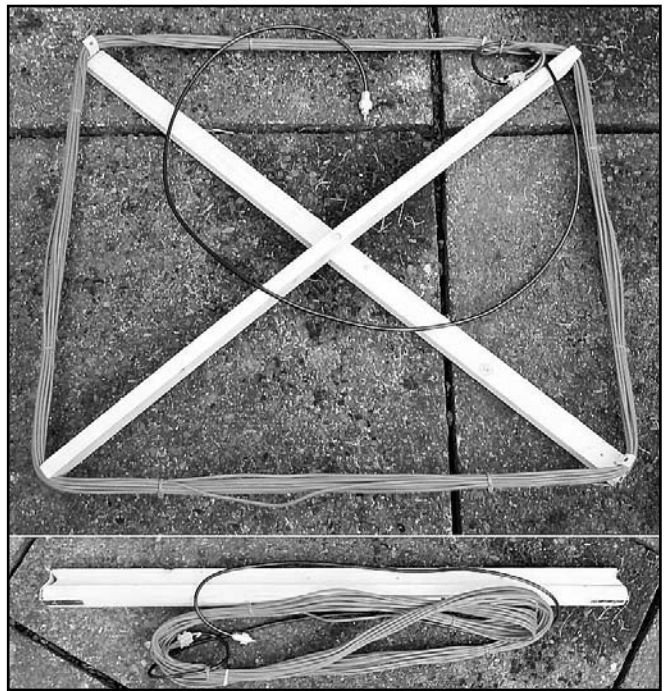
Several articles have been published on building loop antennas for Heyphones (ref 7,8). To maximise range these are tuned to resonate at the carrier frequency of 87 kHz. Making a loop is trivial; tuning it to resonance and checking that it remains so is not. However for High Pasture Cave the passage was known to lie only a few metres below the surface so maximising range was not a priority. I decide to keep it simple and use simple untuned loops.

### **Constructing the Loops**

Many years ago an abortive attempt at designing a cave radio left me with two loop antennas that I disinterred from my loft. These are wound in a wooden former about 0.5m square (photo 1). One has two turns of ten way ribbon cable (core 0.7mm diameter ie 19x0.14mm approx) giving a total of 20 turns, while I wound the other with eight turns of 50 x 0.25mm high current wire that I had lying around (Maplin PA96E). One of the wooden formers has spirit levels attached so it can be set horizontal when being used underground. I also



Above:- The loop antennae used at High Pasture Cave. The spirit level is on the one used underground.



Right:- The collapsible loop. Photos: I Young

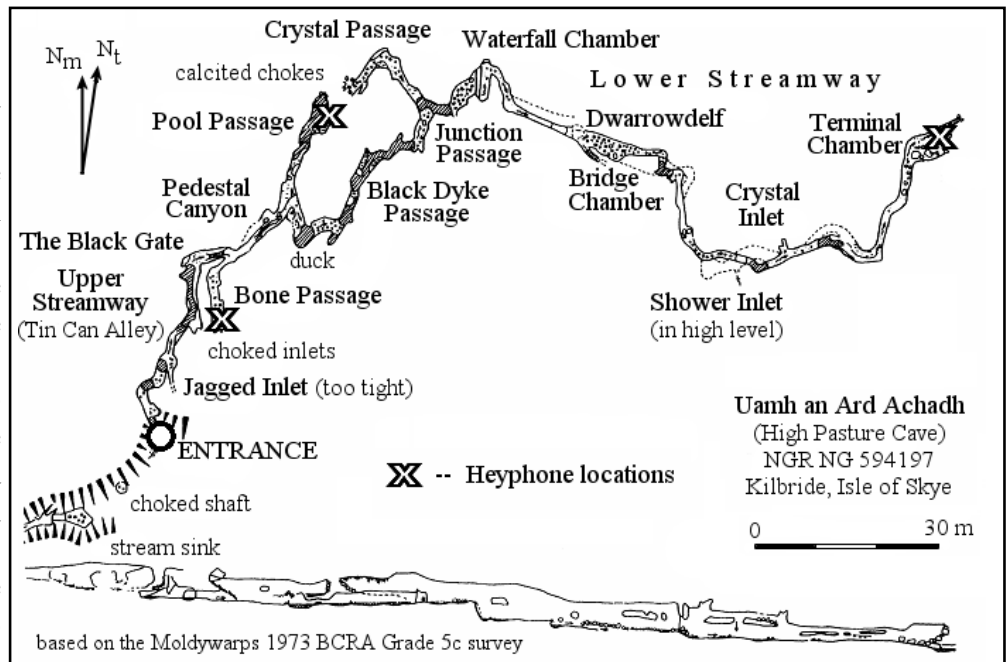
made a third collapsible loop 600mm square with 12 turns of the same wire for places the wooden loops wouldn't go. They connect to the Heyphone loop aerial connector via a length of coax and a UHF PL259 type plug.

**Testing**

I tried all three loops in different combinations and there was no difficulty is obtaining clear signals and distinct nulls at 30m range - far greater than I was likely to need for High Pasture Cave. I didn't attempt to find a maximum distance. This and determining the optimum loop design I leave as an exercise for someone with a lot of time and wire.

**High Pasture Cave**

In June 2004 while I helped Tim Lawson with the geomorphology survey, we chose three locations in High Pasture Cave for radiolocation. The first was the end of Bone Passage - the reason for the whole exercise. The transmitting loop was set horizontal using the attached spirit levels and while the underground Heyphone was set to continuous beeping I took the other Heyphone and loop and walked around the surface looking for nulls as I



Moldywarps survey with added passage names and Heyphone location points.

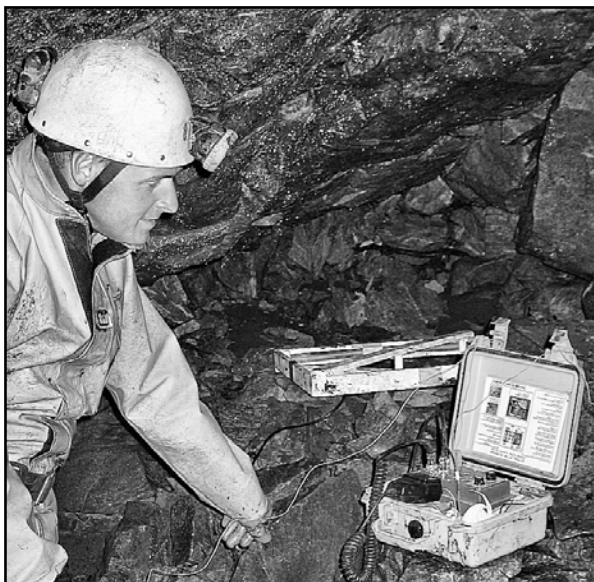
rotated the loop about its vertical axis. Each time I found a null I marked the direction with two sticks spaced several metres apart. Once I had done this several times I made my best guess as to where all the separate lines would cross and poked another stick into the ground there. I then checked that this gave a null whenever the receiving loop pointed directly at it as I walked round it at a distance of several metres. A final check was to place the receiving loop in a vertical plane directly above it. If this was the correct position then I

should have got a null no matter which compass direction the loop was pointed. In fact I needed to tilt the loop slightly to get the best null probably due to slight variations from symmetry in the loops. The result was very convincing and a wooden peg was hammered in to mark the spot.

The second location tested was in the next passage to the left after Bone Passage - Pool Passage. This ends in a collapse and a pool and is thought to be the original main stream passage before the present route opened up. We wanted to see if the end of this was below any indications of collapse on the surface. Again I found a good location on the surface but it was not near any obvious depression or holes.

The third and last location tested was Terminal Chamber. This was assumed to lie below the dry waterfall at the head of a shallow and normally dry valley and so it proved. In fact the Heyphone was hardly necessary as I could hear the sound of running water coming from between the boulders. I could also faintly hear Steve and Tim talking as I waited for them to start the test. I got a reasonably good result here, but didn't take the same care over it. Something to do with being in a depression sheltered from the breeze and sharing it with several thousand midges!

Surface excavations during autumn 2005 found the top of a steep staircase which should enter Bone Passage as expected. This entrance was deliberately filled in and one surprise was the discovery that a middle-aged pregnant woman and an infant had been buried there. It will be very interesting to see what the complete clearance of the ancient entrance will reveal this year. Reports on all the site work done to date appears on the web site (ref 9), and though digging stopped for the winter several months ago reports from the various specialists analysing the finds continue to appear there.



Steve Birch, Heyphone and loop in Terminal Chamber. Photo: I Young

## Conclusion

Using Heyphones for radiolocation over distances of several tens of metres doesn't require complex loop antennae. Simple untuned loops with ten to twenty turns proved perfectly adequate at High Pasture Cave and gave results with a perceived accuracy of a fraction of a metre.

## References

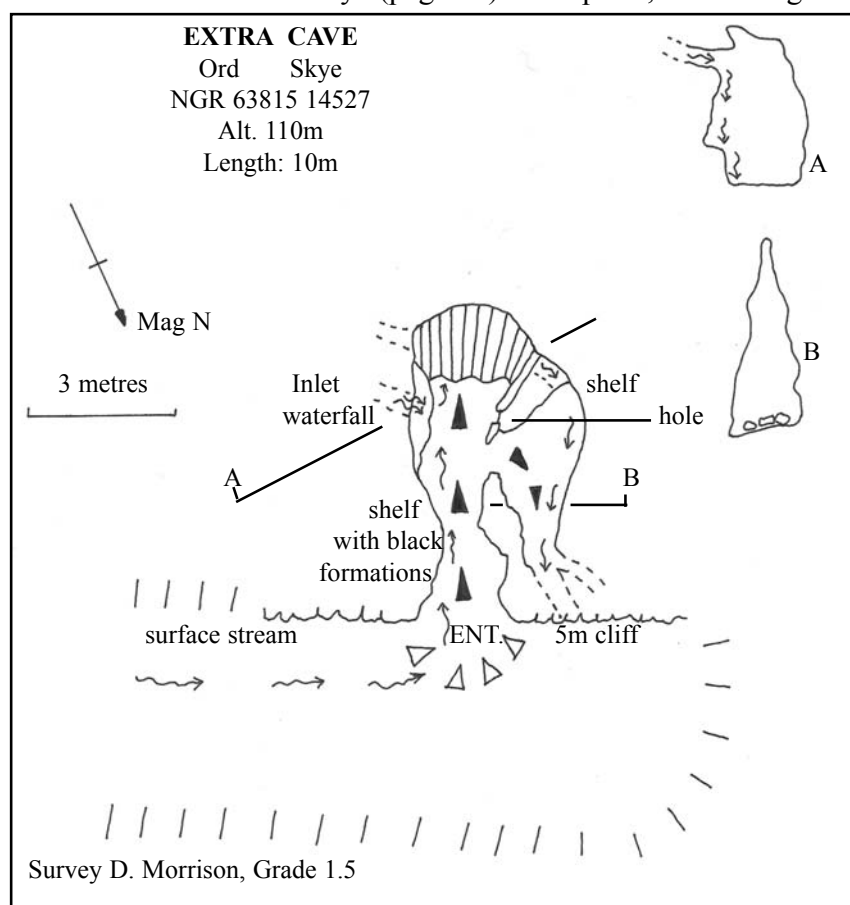
- 1 Birch, S.A. (2002) *Uamh an Ard Achadh (High Pasture Cave): Deposits of Bone Breccia and Anthropological Indicators from a Limestone Cave on the Island of Skye*. GSG Bulletin - 4th Series, 1(3) (October 2002), pp12-27
- 2 Birch, S.A. (2004) *Uamh an Ard Achadh (High Pasture Cave): A Window on the prehistory of Strath, Skye*. GSG Bulletin - 4th Series, 2(2) (October 2004), pp39-46.
- 3 Sanders, J. (1973) *UCLSS find new Scottish caves*. Descent 25, pp10-12
- 4 Ellis, B (1976) *Surveying Caves*, British Cave Research Association,
- 5 Young, I. (1997) *Creag nan Uamh Area Cave Survey*, GSG Bulletin - 3rd Series 4(2) pp36-43
- 6 Glover, R.R. (1976) *Surveying Caves by Magnetic Induction*, *Surveying Caves*, Bryan Ellis and British Cave Research Association, pp42-56.
- 7 Bedford, M. (2002) *A Loop Antenna for the Heyphone*, The CREG Journal, No 50, December 2002, pp8-10
- 8 Heeb, B. (2005) *Parallel Resonant Loop Antennas for Cave Radios*, The CREG Journal, No 61, September 2005, pp6-7
- 9 [www.http://www.high-pasture-cave.org/](http://www.high-pasture-cave.org/)

**THE MYSTERIOUS CASE OF THE DISAPPEARING CAVE**  
**and**  
**MINES A DOUBLE A TALE OF TWO SITES**

By Richard Simpson

After a week of severe gales and continuous rain in November, a break in the weather allowed a search for Mossy Cave near Ord (Skye). It had already eluded previous searches from Steve Birch, Martin Hayes and more recently David Morrison.

With a copy of Martin's article extracted from GSG Bulletin (3rd Series 4(1) page 13) as a guide, David Morrison and myself set off across the moor. We were hopeful of finding the sinks and resurgences noted on Martin's map, but were surprised at how little surface water there was in the burns considering the amount which had fallen previously. We headed firstly to the woods around the Garbh Allt but a search here failed to find Mossy Cave. Slightly disappointed we made our way above the tree line to the plateau to search for the features described in Martin's article. This area has a scattering of limestone outcrops with the odd tree, which gave encouragement. A sink and small resurgence was found but it is not known if this is the one marked on the map. A larger slot shaped resurgence was found by David on his last rece trip and was GPS'd at 63605 14074, alt. 105 metres. A sink within a gully near the top of the woods at 63955 14610, Alt 97 metres was dug into but soon stopped when it seemed to be more of an effort than first thought, so we had a quick look for its resurgence, but this could not be found. We met back at the abandoned dig in the gully and a bearing to Mossy Cave/Extra Cave was taken and sure enough we came upon (sooner than expected) an igneous dyke and a trench leading to a cave entrance below a 5 metre cliff. We inspected and surveyed the cave and deduced this could not be Mossy Cave as the co-ordinates 63815 14527, Alt. 110 metres made no sense with the Caves of Skye (page 64) description, even though it does mention an igneous dyke.



It had started to rain while we were in the cave and realising our brief spell of dry weather was over for the day we began to make our way back to the car. We covered the high ground and checked several holes along the way before a small hole above a sink in a limestone outcrop showed some promise. Large pieces of brittle limestone soon covered the area and by the time we called it a day it was clear we had some cave passage even if it did look a bit tight.

We returned the following Sunday and felt confident of finding Mossy Cave and ending its disappearance as we traversed across the high ground above the roadside barn/bothy to avoid the lower boggy approach.

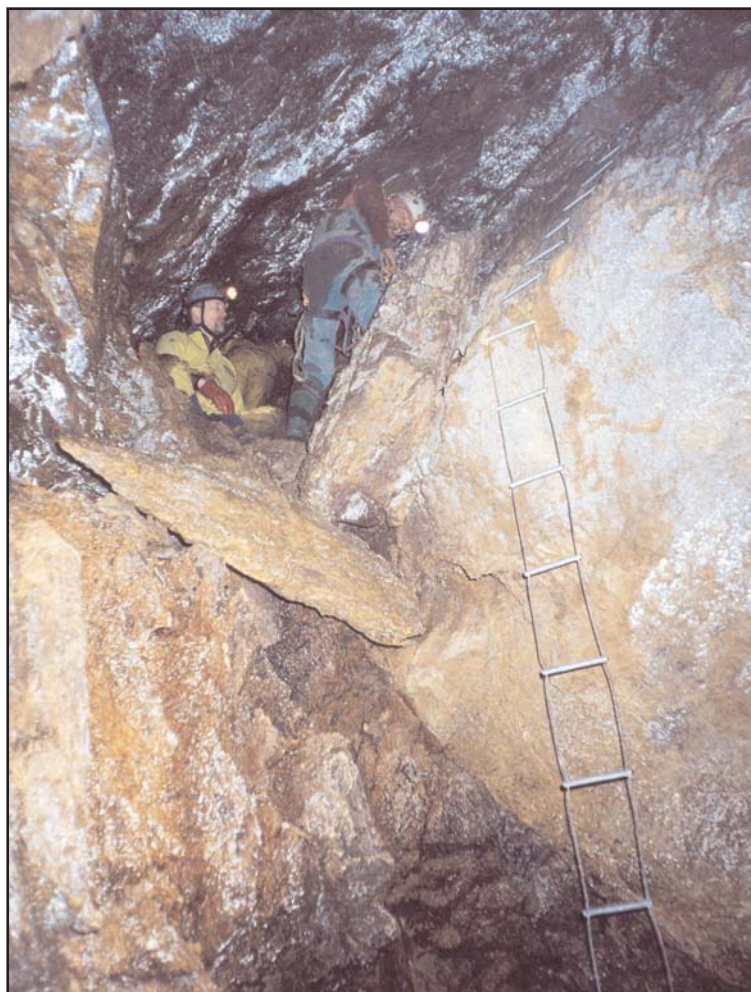
As the dig we halted the week before was closer we made our way there. A mass of boulders strewn about the site

looked impressive and would need to be tidied up before we left the area. David set to digging the steep sloping passage at the entrance until he was almost upside down and had to be hauled out by his wellies while



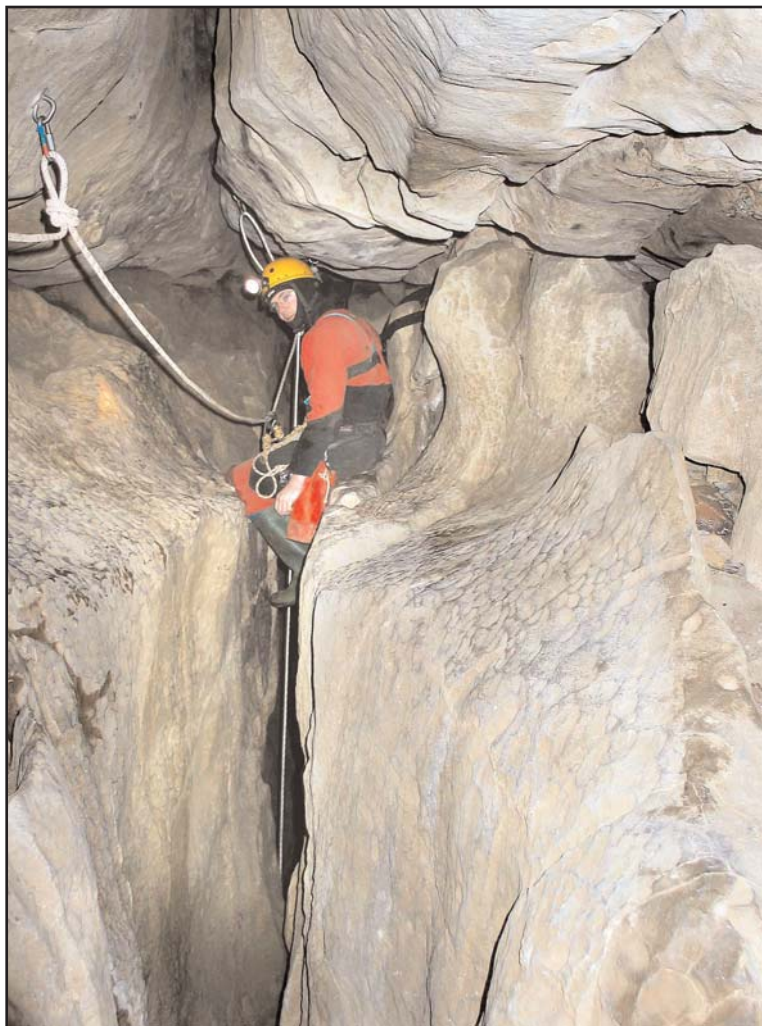
**Julie Hesketh near the V-Necked Sweater, Bowden Hill Mine, West Lothian. February, 2006.**

**Photo. Alan Jeffreys**

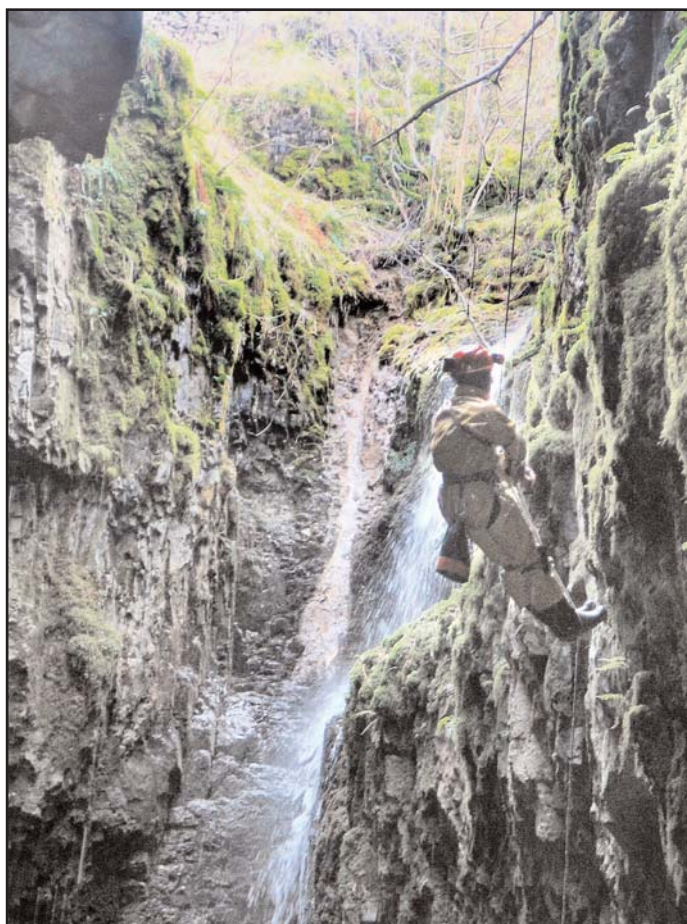


**Ladder climb in Hibernian Hole, Glen Duror, February 2006. L-R: Malcolm McConville, Roger Galloway.**

**Photo. Alan Jeffreys**



**Ross Davidson at the head of the final pitch, Jingling Hole, Feb. 2006. Photo: Ivan Young**



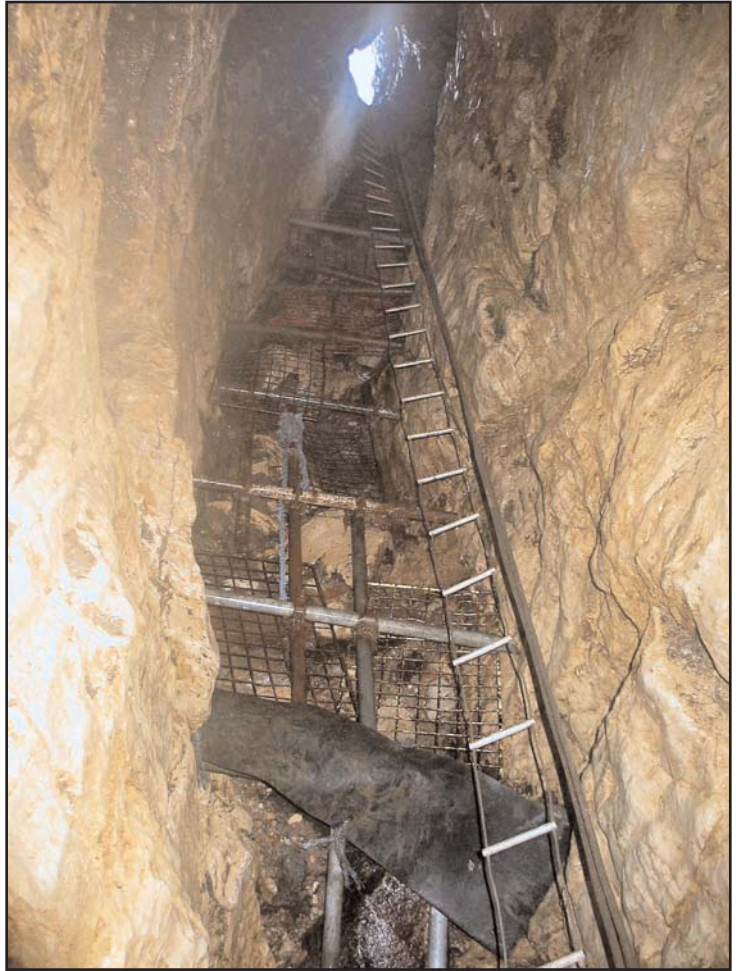
**Unknown cover on the direct route down Alum Pot, Feb. 2006. Photo: Peter Ireson**

**THE RESTORED GLORIES OF RANA HOLE**

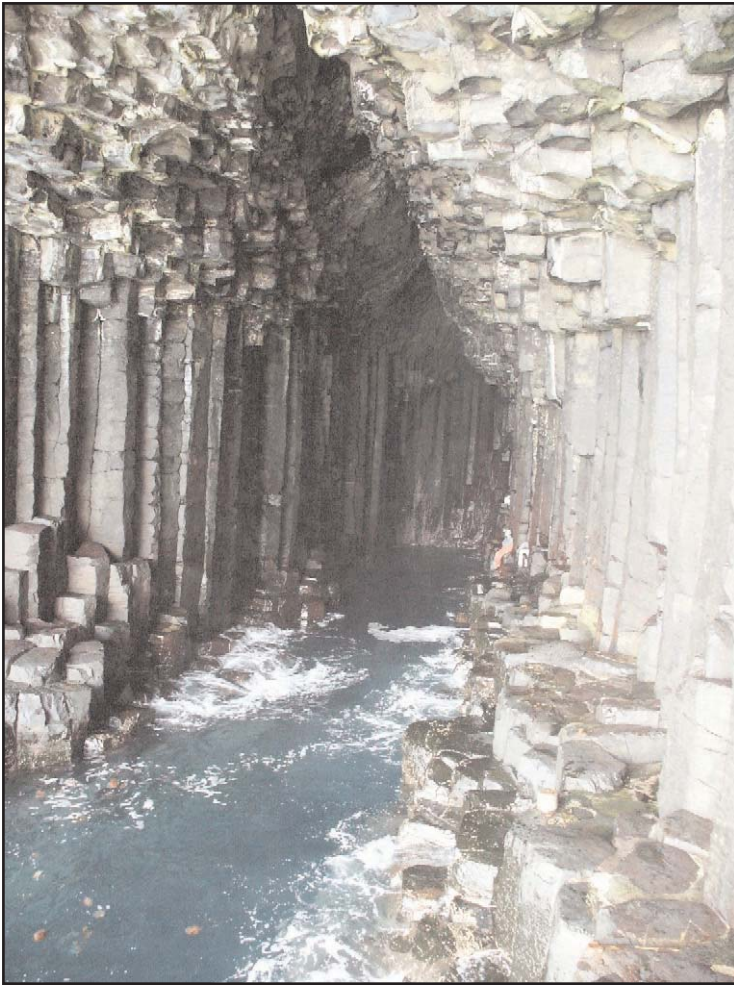
**View looking up entrance pitch, Feb 2006.**

**When digging commenced the cave extended down to less than the silhouetted edge at the top.**

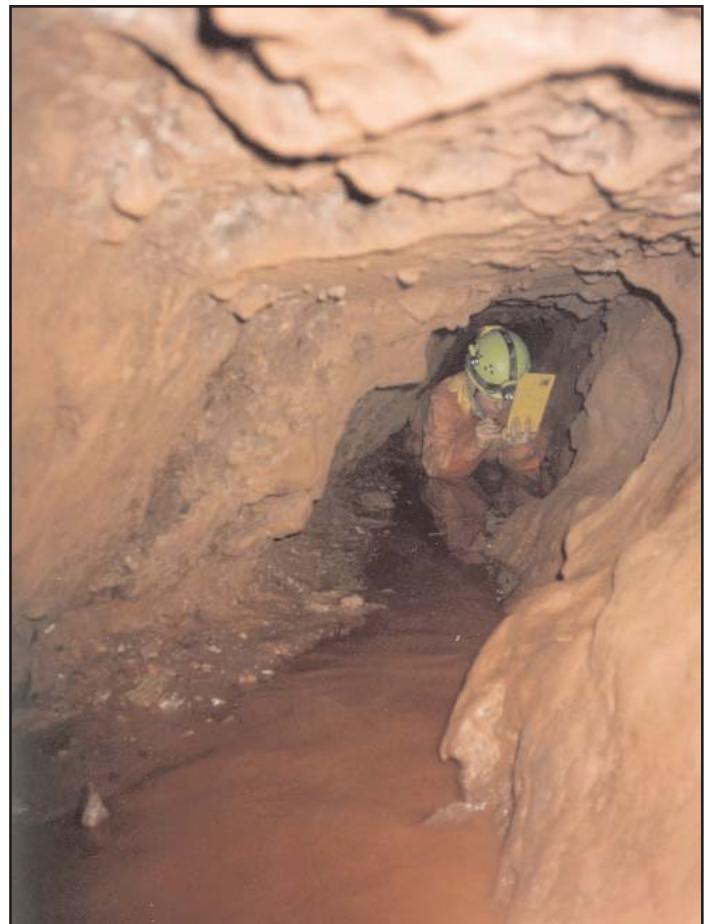
**Photo: Ivan Young**



**Rana Hole. Peter Reynolds at the top of BBC Pitch, Feb 2006. [Picture taken from a metre or so below the previous shot]. Photo: Ivan Young**



**Fingal's Cave, Staffa**  
**Photo: John Crae**



**Jeanie Barrie's Cave, Carlops.**  
**Annie Audsley surveying in the**  
**First Crawl.**

**Photo: Alan Jeffreys**

cradling a boulder. A note to self was made to carry slings to help with the welly extraction. After a couple of attempts to get past some large rocks and a bank of earth several metres into the cave we decided to dig at the sink situated a couple of metres from the entrance, but this was soon stopped when it kept collapsing.

A last try to get past the obstruction was managed with the removal of one of the perpetrating rocks which allowed a tight squeeze over the main offender and a drop of about four feet down a slope on the right to a chamber with a small streamway continuing through low passage which can be seen extending approximately three metres. As a helmet proved to be a hindrance it was left on the surface, so when a fist-sized rock fell from the roof just when an attempt was considered a hasty retreat was made. A return will see the roof cleared of loose rock and with the aid of a hoe the bedding in the stream passage will be lowered, the large rock will also be moved to allow easier access to the chamber.

Another search for Mossy Cave through the woods and along down the Garbh Allt until it flows through a gorge still had us scratching our heads as to its whereabouts. Back at the plateau we followed a dyke hoping it would take us to the entrance, but this proved to be a false lead. After some more searching we called it a day but on the way out a short cave within the bank of a small burn at approximately 6375 1420 was entered. Continuing passage past a low arch was noticed but is too tight. Daylight is seen through a small hole and could easily be widened to give a short through route.

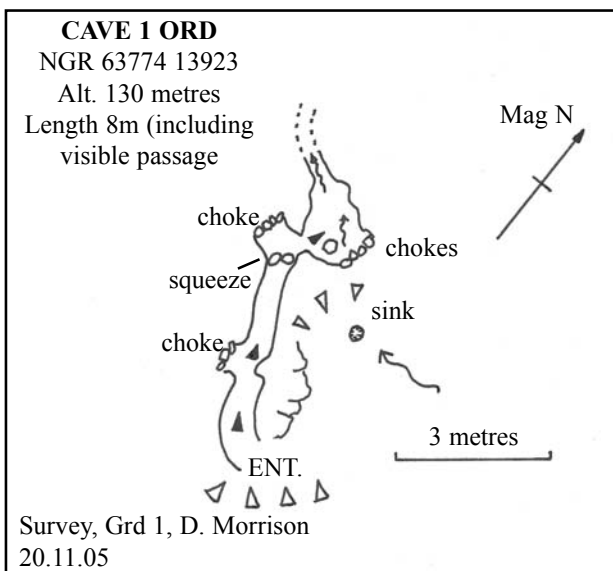


David checking entrance to Martin Hayes' cave (Ord, Skye).

Photo: R. Simpson

The slot resurgence mentioned earlier was looked into and seen to close down to a small crack, but does this open up again as a lot of water comes from this resurgence?

In summary, having thought of using the detective skills of Columbo (acting stupid and hopefully put it off its guard) or Magnum P.I. (but not having a large moustache to hide behind and surprise it), it is left to Sherlock Holmes who said: "When you have eliminated the impossible, whatever remains, however improbable, must be the truth". So! Whoever has 'borrowed' Mossy Cave could they please return it and nothing else will be said on the matter. Thanks.

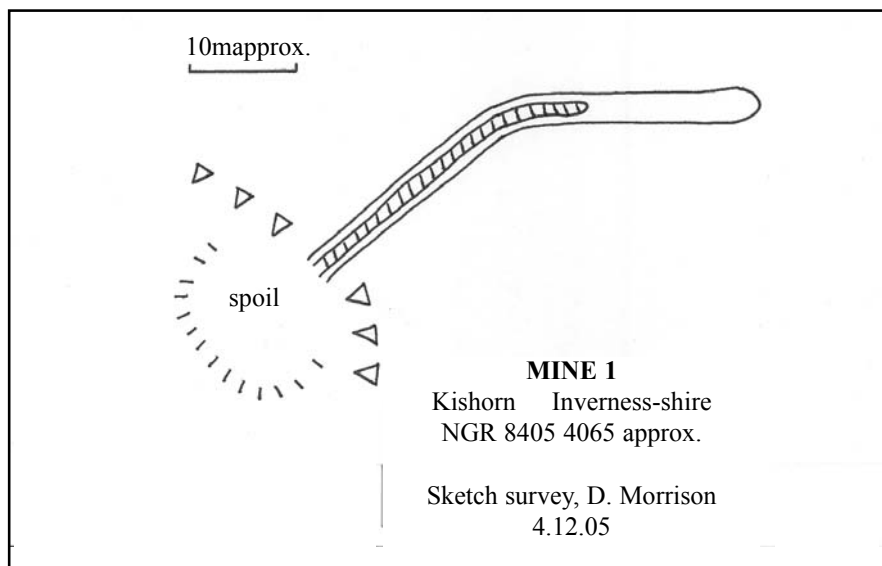


## MINING IN KISHORN

A few weeks later I was finding it hard to stop crying with laughter as an ascending "aaa ooo eee" like a chimpanzee in a boy's choir emanated from the mine entrance. With each step David took through the silt covered floor, the cold water rose quickly, first thigh then waist and very soon chest depth. At this point he made his way back out. A tide mark around his chest separated the freshly washed oversuit from the mud acquired earlier that day while digging in a passage found by Chris Warwick and Mark Campbell in Cave of the Kings. This dig currently has a short flat out crawl leading to a squeeze into a small chamber, where tight descending passage on the right is seen heading back to the main passage beneath large boulders. The way on is another flat out crawl to what

could be another small chamber which has a small amount of water flowing out of it and heads down the tight right passage. Taking turns at digging along this passage soon had us soaked and caked in mud and, having forgotten my helmet and wetsuit, enthusiasm soon waned.

We were soon back at the car, and having changed into warmer clothes we took a quick look at the limestone area to the south of the Allt Mor. Nothing was found here but a suggestion to look at the two mines near the village of Kishorn had us heading up the hill with a crowbar, shovel and an intent to find a way to lower the water at the topmost mine. This can be found on the OS map at approximately 8405 4065. The shorter lower mine has a single passage of about 50 metres which as you wade through, curves to the right and ends



at a blank wall. The larger upper mine is a short walk upstream along a rough track to the foundations of a large limestone building and the mine entrance where the Allt Donn flows out.

The offer to see the mine for myself had me exchanging my Buffalo for a green pvc oversuit which had seen better days, and donning my waterproofs I took the plunge. David followed behind and what could be mistaken for a bad harmony of a Michael Jackson

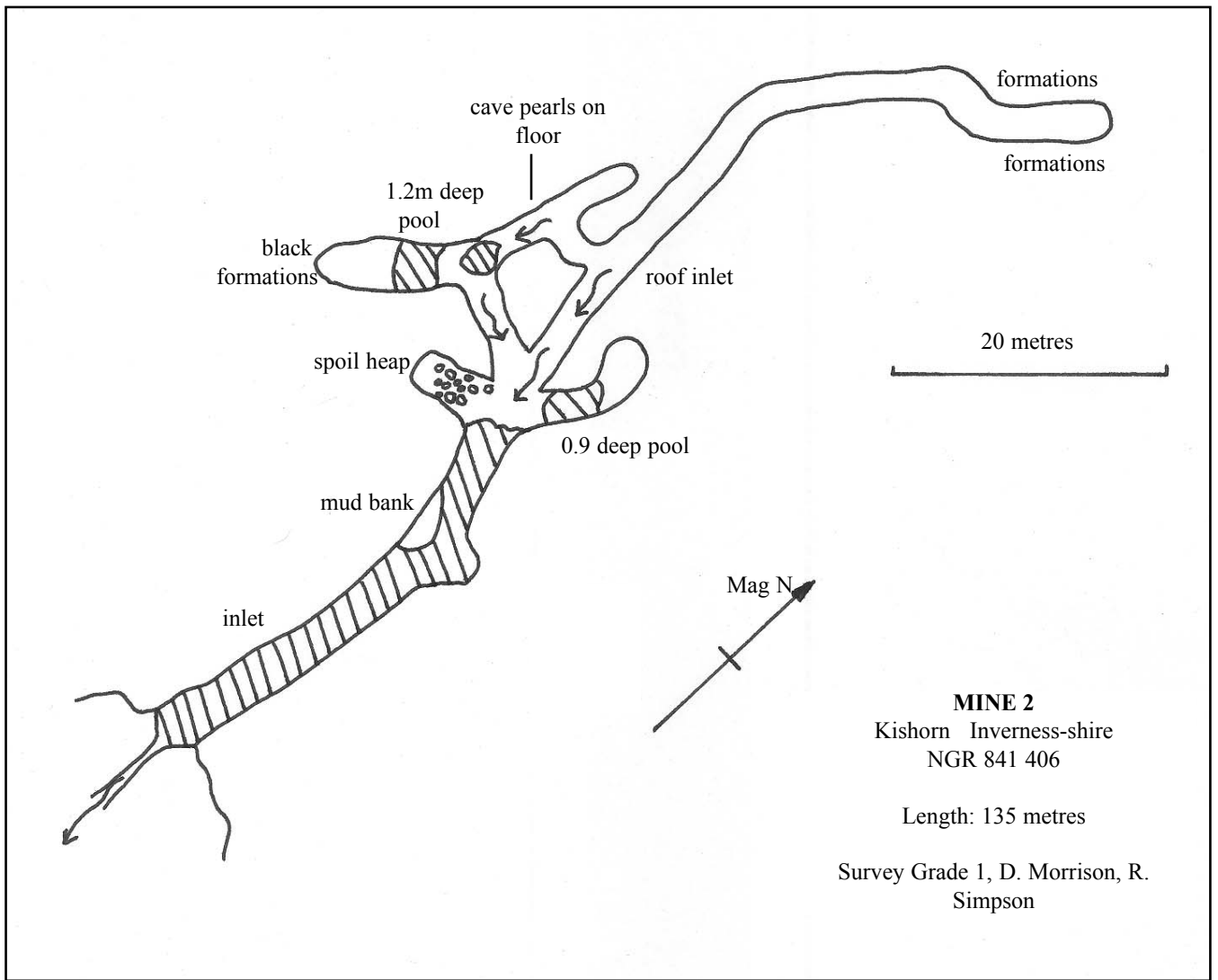
tune could be heard echoing through the mine. The water level gradually lowered and after about 20 metres a mud bank on the left is passed. Continuing on, a spoil heap in front of an abandoned passage is also passed to where a choice of three passages is offered.

To the right a metre deep pool is waded through but this passage ends after a short distance. The central passage carries on for some 40 metres and a rusting bucket and container near its start form part of the remaining evidence of this mine's past. Nearing the end, small stalactites and a fragile flowstone floor stopped progress but a blank wall can be seen a few metres away. The left passage has wooden posts leaning against the wall and another container and wooden box lie next to a split where a deep pool beckons another soaking before the passage ends a few metres later. The main way on continues for approximately 20 metres, a window next to a piece of corrugated iron gives access to the central passage about half way along this route.



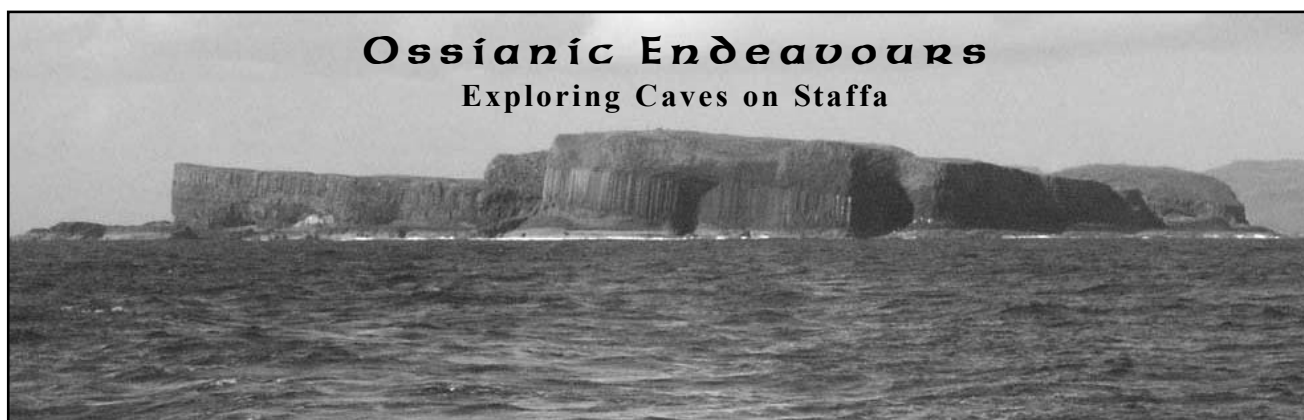
**R. Simpson at the entrance to Mine 2, Kishorn.**  
**Photo: D. Morrison**

Singing our way back out of the mine, it is clear why some people may have thought the system to be flooded and a story of parents telling their children that witches lived there may have kept any exploration at bay.



**Cave Pearls inside Mine No.2, Kishorn**

**Photo: R. Simpson**



*Staffa from the south*

by John Crae  
(All photographs by the author)

The island of Staffa, 6 miles off the coast of Mull (3 ½ miles from Goemetra and Little Colonsay), is visited by thousands of tourists each year, hoping to experience Staffa's natural wonders. Its amazing appearance, of multi-faceted basalt cliffs rising from the sea, provides an enduring image. The island was 'discovered' in 1772 when noted explorer and botanist, Sir Joseph Banks was informed of its existence by a fellow traveller, although it was undoubtedly known to local inhabitants who used it to graze cattle. Since 1772, many notable figures have visited including Walter Scott, Keats, Wordsworth, Turner and Queen Victoria.

Several large caves have been recorded on Staffa and some descriptions appear elsewhere (particularly in "Staffa" by Donald MacCulloch, although with only one survey, of Fingal's Cave, in the first edition). The 1:10,000 Ordnance Survey map records some caves on the island and visitors have mentioned more but most are noted in passing or are described briefly with only the major dimensions given. These dimensions vary widely as where caves start and finish is largely subjective and the exact points measured were not recorded.

Against this background, Bob Mehew, at the GSG dinner in Appin in 2004, suggested a visit to Staffa in 2005 to record the caves. Initial enthusiasm waned as few cavers were willing to commit themselves until nearer the time of the trip. Others were unwilling to camp for a week on an exposed and uninhabited island to explore sea caves and as the year progressed, other commitments intruded and most potential surveyors dropped out leaving a core team of six: Bob Mehew (GSG/SMCC), Tony Jarratt (GSG/BEC), Tony Boycott (GSG/UBSS), Duncan Butler (BEC/RUCC), Vern Freeman (GSG/BEC) and John Crae (GSG). Bob Mehew, as organiser, set the agenda, convincing the National Trust for Scotland that they required a baseline survey as a condition of their management of a site of special scientific interest under the aegis of Scottish Natural Heritage. Obtaining permission from both bodies to camp on the island, he coordinated the logistics required to transport the team to the island and carried out considerable research into previous scientific studies.

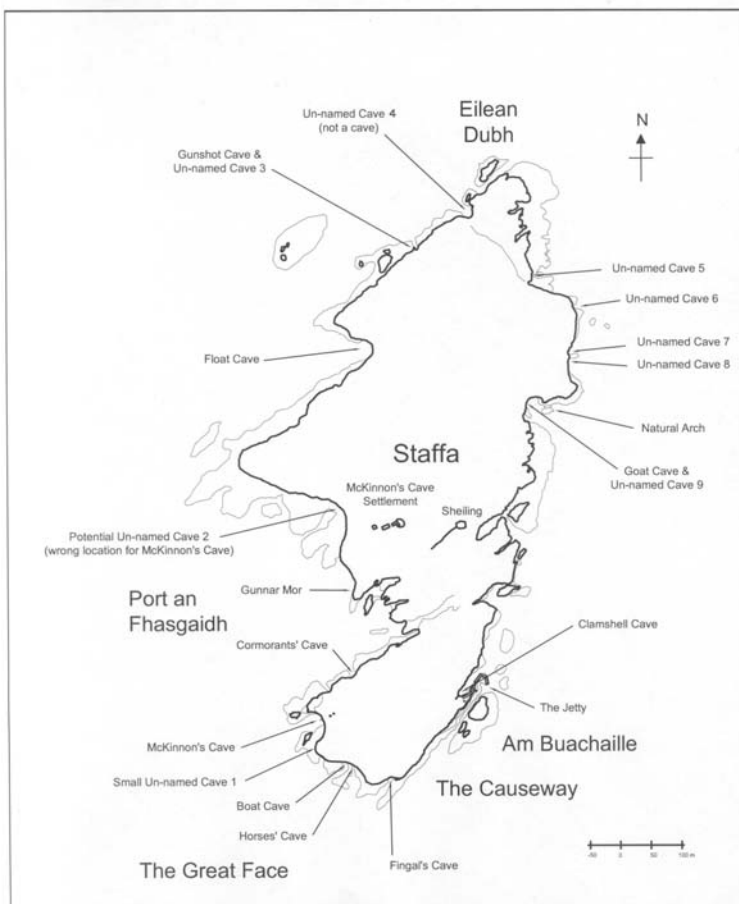
A preliminary survey, early in 2005, to determine routes to the known caves proved impossible as NTS and SNH did not want anyone approaching the breeding grounds of the birds nesting on the island (colonies of cormorants, shags, puffins, and gulls are the reason the island is a SSSI, the geology of the island only rates two sentences). The investigation of the caves was therefore confined to after the breeding season. Two unofficial trips were made early in 2005. Bob visited in June to arrange the boat to take the expedition to Staffa and to check sources of water while I visited as a tourist in May. The expedition took place in late August to ensure the nesting birds had departed and to coincide with low Spring tides as close inspection of the tide tables revealed that many caves were only accessible for less than two hours during Spring Low tides.

One purpose of the expedition was to gather data for Bob's study on the mathematics of cracking in glassy solids (lava solidifies like glass rather than crystallising). The columns on Staffa are a product of the slow cooling during the Tertiary period (60 million years ago) of Fingal's Cave Flow, the main lava flow from the

central igneous mass located under southeast Mull. The cracking pattern arises from the contraction of the lava as it cools, stressing the viscous material as it approaches its solidification temperature. Although simple considerations relating to minimising surface energy suggest a hexagonal (six sided) cracking pattern, detailed work has yet to justify this hypothesis. In nature, there are no regular surfaces and lava cooling over an existing landscape of slopes, cracks and vegetation produces irregular columns. Laboratory experiments can mimic this cracking in alternative materials such as corn starch. (See <http://www.physics.utoronto.ca/nonlinear/index.html>) Since cooling occurs from both the top into the air and from the bottom into the earth, the rate of cooling is quite different and differing column sizes can be seen in the two layers.

On Staffa, the basalt columns lie above a number of layers of compacted ash, forming the underlying rock and below subsequent lava flows, some of which also show columnar formations although not on the scale of Fingal's Cave. As a minor point, Bob also wanted to prove or disprove a theory, based on MacCulloch's comment, that fault movement along the centre line of Fingal's Cave formed columns on either side of the cave whose edges were not parallel. This effect is seen in photographs taken from the interior of the cave.

Data on column sizes on Staffa was collected by surveying the basalt pavement outside the entrance to Fingal's Cave. This location was selected for its publicity value and because it is most typical of slow regular cooling. Three basic techniques were used. The first and most traditional technique was to physically measure the edges of the individual columns. By taking dimensions across the columns from corner to corner, it was possible to draw a column section and eventually plot a larger area of The Causeway. A second technique involved photographing the columns. By constructing a fixed frame, photographs were taken at a set distance with rules along the edges of the columns allowing the dimensions to be calculated at a later date. The third technique plotted individual points using electronic distance measurement (EDM), with Duncan recording the location of points in three dimensions using an electronic theodolite, measured by lasers back to a survey point. Each of these techniques has limitation and all are time consuming. In all some 30 columns were recorded during the trip. This may seem pitiful considering the time spent on Staffa but measurements were only taken when work related to the baseline survey was not taking place.



The primary purpose of the expedition, however was to record the caves. Surprisingly, despite the long history of tourism, there is no accurate map of the island available. The current large-scale ordnance survey map lacks detail and older maps are of limited use due to their small scale and conflicting information. A brief description of the island is therefore included as well as more detailed information

on the individual caves.

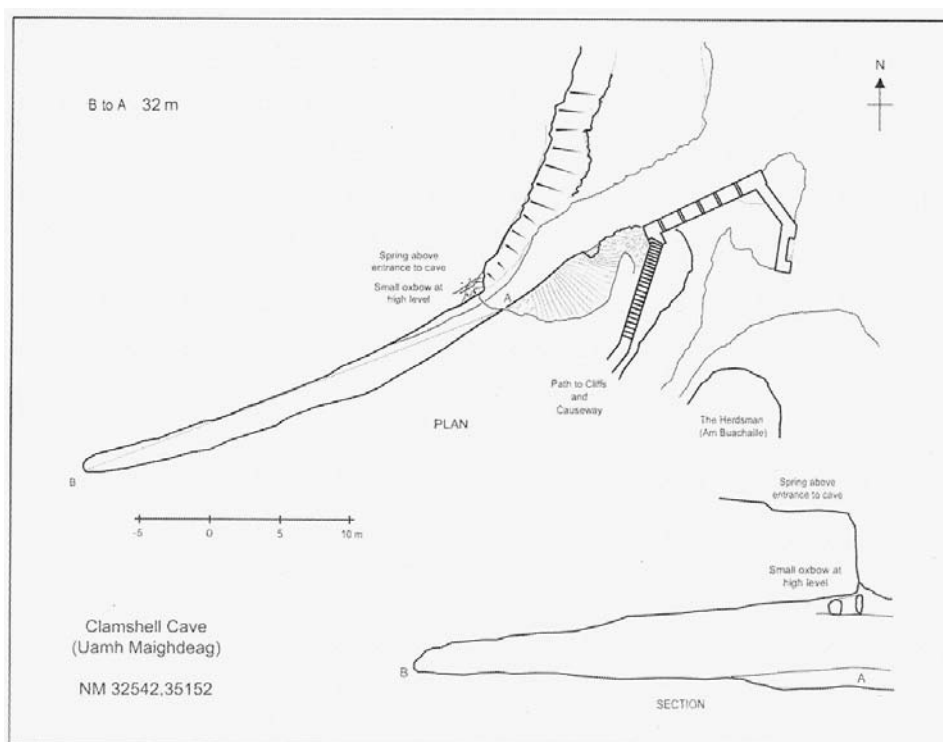
Sailing from Fionnphort, Staffa edges into view, showing the classic image of the south side of the island. From west to east, a long view of the west shore to the cliffs north of Port an Fhasgaidh gradually disappears

behind the rocky mass of the Great Face. East of this, a wide opening leads into McKinnon's Cave. Midway along the Great Face is a narrow cleft known as Boat Cave. Some 25m to the west of this Horses' Cave is also visible at sea level. At the east end of the Great Face is Fingal's Cave, the most famous of Staffa's caves and the main destination of the tourists who arrive in droves. These and all other visitors arrive at the concrete jetty 200m to the northeast, at the northern end of The Causeway, a low and irregular platform at the base of the cliffs, made from the bases of broken 'hexagonal' pillars.

At the north end of The Causeway, a channel separates the cliffs from a small island known as the Herdsman (Am Buachaille) formed from smaller distorted basalt pillars. To the south, the pillars are almost horizontal allowing waves to crash over this island at high tide. To the north, the curving columns rise to a conical peak. Sheltered by Am Buachaille is the jetty. This is reached by small boats through a channel surrounded by rocky shoals. From here, a path leads along the cliff to Fingal's Cave and a stair rises to the cliff-top and the 'level' upper surface of the island. North of the jetty is the entrance to Clamshell Cave.

### Clamshell Cave (An Uamh Maighdeag)

NM 32574,35177



Not accessible at high tide as water fills the inlet, the cave is exposed at low tide although a shallow pool remains at its entrance, which is reached by climbing down from the jetty to the cobble shore or from north of the cave walking back along the shore. The distinctive curved columns at the entrance lead to 32 m of 2-3 m wide and 10-12 m high passage with a rock floor becoming shingle at the back of the cave. Steep sides, sloping out from the base of a rift at floor level open out to the full width about 2m from ground. The cave narrows again near the roof. A small oxbow passage is



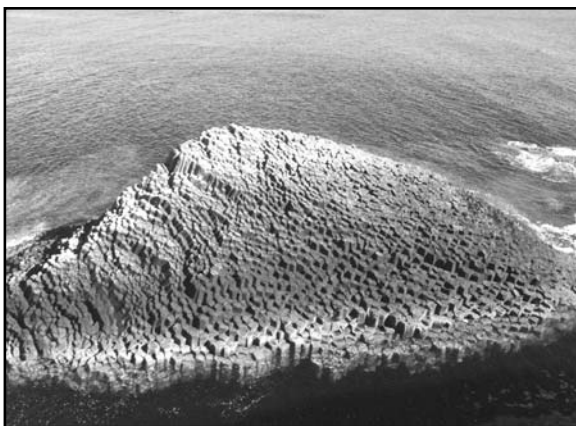
*Curved columns south of Clamshell Cave*

visible at high level to the north of the entrance with a trickle of water falling from the small spring on the surface above the cave.

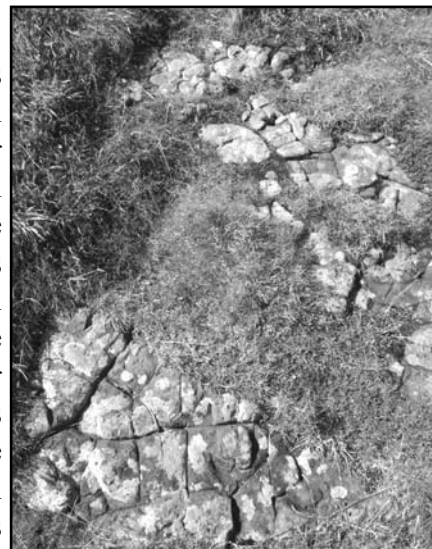
Duncan Butler carried out a brief survey of the cave (19 August). This was followed up by a survey with tape, compass and clino (21 August), carried out by John Crae, Tony Jarratt and Tony Boycott.

Climbing the narrow stairs from the landing point, a gentle slope leads to Meall nan Gamhna or the Hill of the Stirks at the south end of the island. The literal translation is 'hill of the cattle' but there is little reason for this to be called a hill and while cattle were kept on the island, nothing suggests they were confined here. Less literal is a corruption of the Old Norse 'Hill of the Stalks'- a good description of the cliffs below. From the cliff, there are views down onto The Causeway and Am Buachaille. Also, poking through the very shallow covering of earth on the path near the cliff top, are small outcrops of a layer of basalt columns. Not of great significance in themselves, they show the irregular small scale basalt columns

of the upper crust or entablature caused by rapid cooling. They also illustrate the lack of earth cover at this end of the island.



*The Herdsman (Am Buachaille)*



*Rock Outcrops*

Along The Causeway is a path across the broken bases of the larger basalt columns. In places, where The Causeway narrows handrails have been inserted to protect the tourists. These however create bottlenecks where it is not possible to pass (the survey team

had to wait until the tourists had left to shift equipment). Deeper drops along the path have been built up with small sections of reinforced concrete and the path coated with a non-slip surface. Fortunately, beyond Am Buachaille, The Causeway widens out and those willing to take a less even course can spread out a little.

A minor feature on the cliffs about halfway along The Causeway (about 10m south of the lifebelt fixed to the cliff) is a star of David and the inscription 'VESNVOM SVMLEILVG, AD 1850, DVLCISSIMA SOLITV-DO', carved onto one of the columns. Latin scholars translate second part as 'Most Beautiful Solitude', an apt expression if you are on the island in a small group as the survey team were for most of the time but not between 10 am to 4 pm when boat trips bring the tourists.

At the southeast corner of the island, The Causeway extends into the sea and around the curving cliff is Fingal's Cave. The cliff over the cave gives views down on to The Causeway, as well as views to Mull but as the cliff-face is relatively straight, there are no views of the cave entrance. This is not a problem however, given the ease of access from below and the clear views of the cave obtained from the sea and The Causeway.

**Fingal's Cave or Musical Cave (An Uamh Bhin)** NM 32450, 35039

Also known as the Cave of Melody and the Great Cave (An Uamh Mhor)

The best known of Staffa's caves, Fingal's Cave - officially called Musical Cave (An Uamh Bhin) - was popularly renamed after the legend of Fingal, whose airy hall is described in the Ossianic poem 'Errathon'. Ossian's poetry was largely an invention of James MacPherson, in 1765, but the legend survives of a battle between a Scottish giant and an Irish giant, Finn MacCool who apparently built the Giant's Causeway to allow his rival to cross to Ireland and meet him in battle, but tired after his efforts, Finn dressed as a baby and pretended to be his own son. The Scottish giant seeing the size of the baby did not want to face the father and retreated to Scotland destroying The Causeway. This story and the Ossianic poem are based on Irish history (from the Chronicles of Ulster), where in 250 A.D., Finn MacCumhaill, or Fingal, was recorded as leader of a band warriors protecting the Irish King. Fingal's son Ossian is traditionally bard of the Gaels. The Musical Cave or the Cave of Melody became associated with the Ossianic legend when Felix Mendelssohn visited in 1829 and was inspired by the sound of surf crashing into the cave to write his Hebridean Overture.

Both sides of the cave are lined with the polygonal basalt columns of the main lava flow. To the northwest, these are broken off at irregular heights forming a rough ledge with the column height varying widely. On the southeast side, a more regular ledge has been formed with most of the columns at or near the same level. The roof of the cave displays a similar columnar pattern. Along the centreline of the ceiling, a fault line is

visible and the columns either side weakened and eroded to form an inverted V. The further reaches of the cave are slick with the spray from breaking waves even on the calmest days. On the columns of the south-east wall, the graffiti reflects the long history of tourism, with dates varying from 1776 to 2005. In 1928, a Miss Barker of Cumberland recorded finding the initials JB (possibly Joseph Banks) and the date 1772 at the end of the cave but while Jrat found the initials during our survey, the date below was obscured by later graffiti (if we had the right initials).



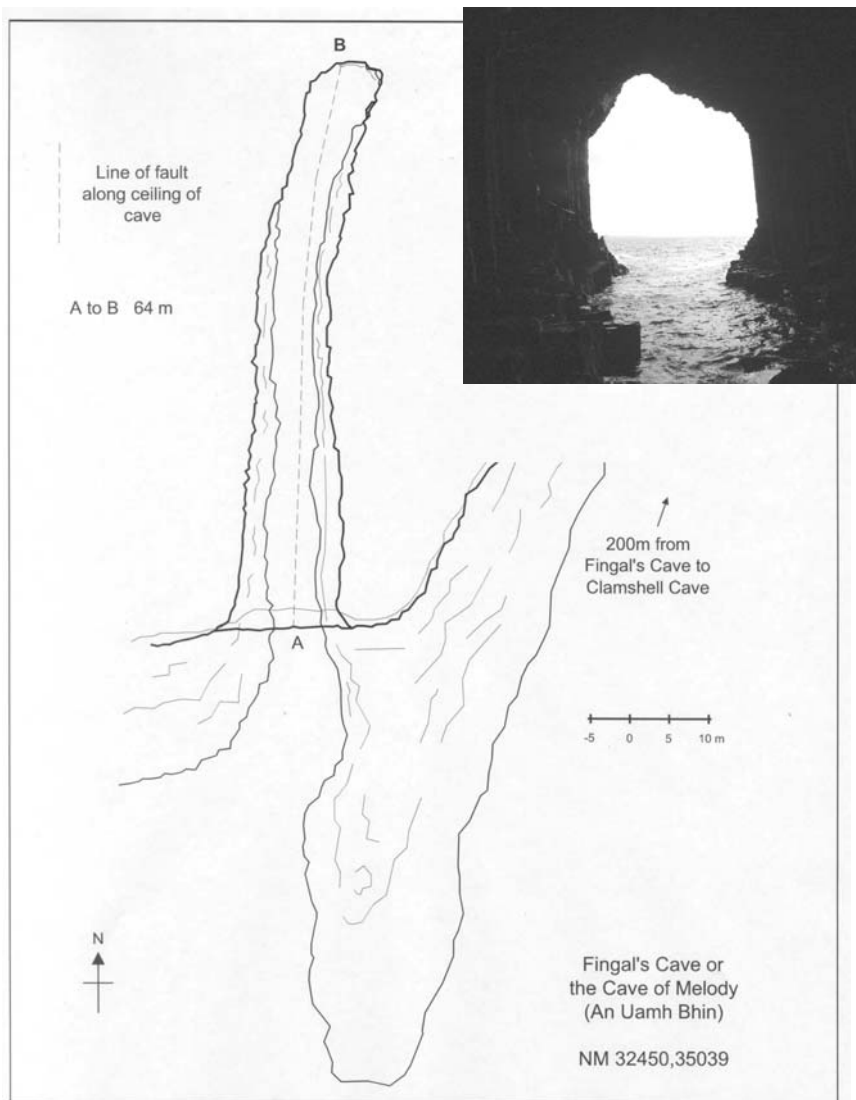
*Fingal's Cave*

Safety lines were rigged across the surging current at the entrance to the cave (19 August) and Jrat's Russian inflatable, the 'Battleship Potempkin' was hauled several times across the cave mouth to ferry gear. This allowed access to the northwest side of the cave where another line, fixed to pitons wedged into existing cracks between basalt columns, gave access to about 2/3 of the cave. On the southeast, a ledge of basalt columns continued to within 6m of the end of the cave. The point reached by visitors used to depend on conditions and individual bravery but today's tourists are only allowed into the first 17m of the cave.

The entrance and overall length (64 m) were measured by Duncan Butler using EDM (20-22 August). A supplementary tape, compass and clino survey was carried out

by Tony Jarratt, Tony Boycott and Vern Freeman (21 August) with additional measurements taken with a laser distance meter (disto). Between detailed column surveys (18-22 August), photographs of the cave were taken by Bob Mehew and John Crae. Tony Boycott dived to explore the base of the cave (20 August) and confirmed that the base of the cave is cut into the ash layer below the basalt columns with the bottom of the cave lined with a layer of larger rocks and boulders. Duncan Butler and Tony Boycott later swam to the end of the cave (20 August) confirming that, below the waterline, the cave ends in a sloping bank of rock.

The basalt column survey was briefly interrupted by the arrival of Professor Stephen Morris, a Canadian physicist and mathematician (temporarily based at Cambridge and working on the problem of non crystalline cracking). Bob took time off to discuss the physics of cooling lava and to



show Steve rock formations at Fingal's Cave and Port an Fhasgaidh.

Crossing to the west side of Fingal's Cave - it was possible to traverse across the basalt pavement 60m to the west (or alternatively perch on the rocks and wait for the tide to go out further - the ash shelf and most of the basalt pavement were covered at high tide). At this point, the ash layer is cut by a 3m wide channel leading to a narrow slot cut into the ash below the basalt columns of the cliff. This unnamed slot was later renamed Horses' Cave - the name used by David Kilpatrick, son of Chris Kilpatrick, skipper of the 'Iolaire of Iona' - after the white horses (the descriptive name for the foam on the crest of a wave) always visible as the waves surge into this narrow opening.

**Horses' Cave** (Uamh nan Càir), also known as the Blowhole NM 32396, 35063

On the first visit (19 August), made by Jrat, Tony Boycott and Vern Freeman, the low entrance to this inlet was close to the waterline although about 15m of 3 m high, 2 m wide flooded passage was visible. The low roof was made more of a problem by the heavy swell, which brought the water level to the top of the cave.

A second visit by Vern Freeman (20 August), when the tide was lower, revealed 40m ending in a 25 m long beach of large rocks. Vern entered 35m into the cave at extreme low tide but was unable to reach the end due to waves closing down the air space in the final 5m. It is possible (if unlikely) this cave may go further if the rocks were removed but this is not likely to happen given the time and tide restrictions and the difficulties of reaching this cave.



*Boat Cave and Horses' Cave*

In a slight depression in the cliff over Horses Cave, by operating a camera at arm's length it is just possible to obtain a picture of the entrance to Boat Cave, 20m to the northwest. At low tide, this reveals the ash shelf below the basalt and a heavy growth of weed in the channel between the cave and the shore.



*Boat Cave from above*

**Boat Cave** (An Uamh Culaidh)  
NM 32379, 35071

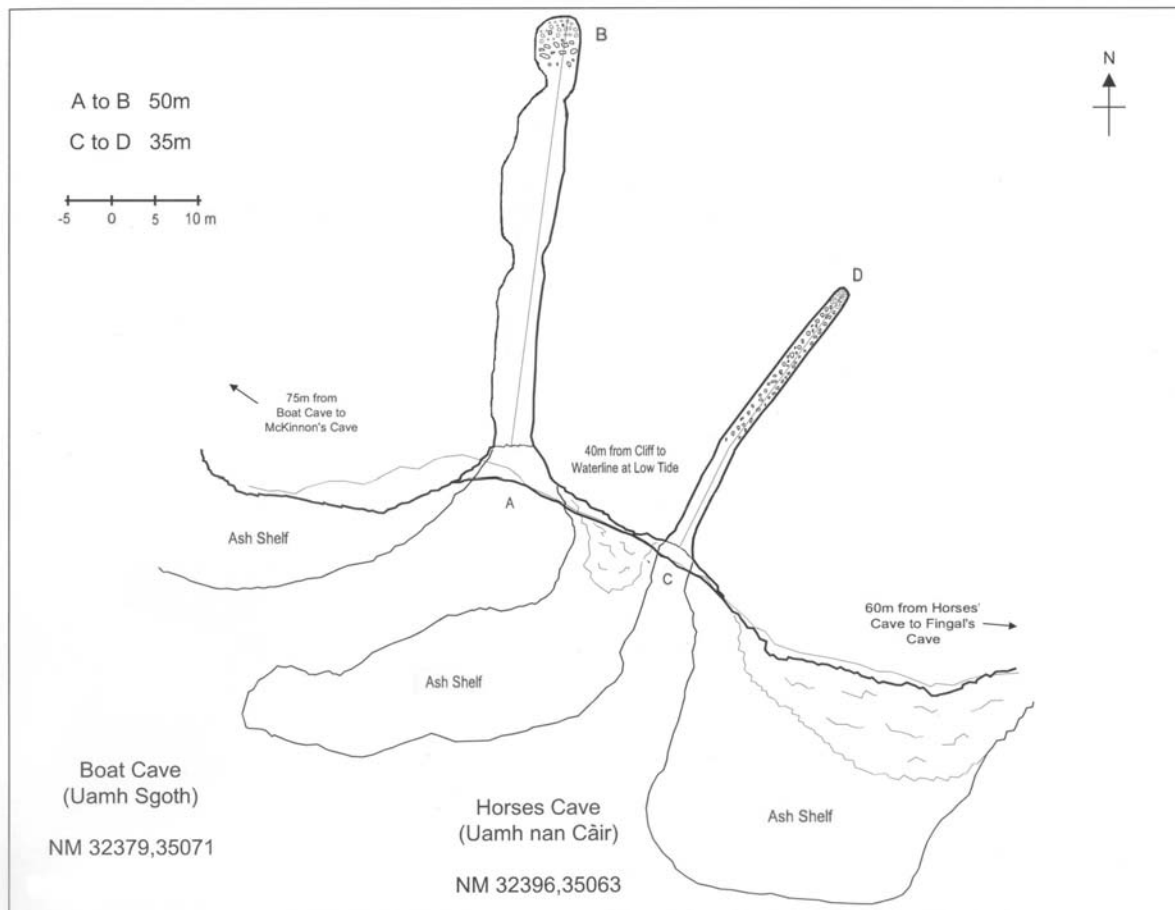
An initial visit (19 August) was made by Tony Jarratt, Tony Boycott and Vern Freeman crossing the mouth of Fingal's Cave and Horses' Cave in the 'Battleship Potempkin'. The crossing at Horses' Cave was particularly hazardous with steep sides, strong currents, weed covered rocks and a heavy surf. A brief survey of the cave was made with compass and clino although the distances were estimated. Although it is beneath a larger arch of basalt columns, the 5 m wide and 8 m high entrance to boat cave is entirely within the ash layer with a straight smooth sided passage running 50 m into

the rock. The flat ceiling of the cave entrance is formed in the ash below the basalt columns at the bottom of the main lava flow, narrowing and becoming more rounded in the deepest part of the cave. The passage ends in a slope of huge cobbles. A second visit was made by Tony Boycott and Vern Freeman (20 August) while Bob Mehew photographed Fingal's Cave from the northwest.

The ash shelf along the base of the Great Face makes it possible to walk from the west side of Boat Cave to

the mouth of McKinnon's Cave. Just to the east, before reaching McKinnon's Cave, two narrow clefts are visible at the top of the ash slope below the basalt columns. One of these was revealed by later investigation to be a 2m deep 1 m diameter tube. This has provisionally been recorded as **Small Un-named Cave 1** (NM 32332,35100).

At the highest point of Meall nan Gamhna, the southeast corner of Staffa, there is a view point (a 2 m high stone cairn) and an Ordnance Survey trig point (the concrete pillar is still present but is no longer used). A concavity in the cliffs to the southwest creates two promontaries where McKinnon's Cave can be seen from above. A protruding ash shelf to the east of the entrance and the cliff face to the west make it impossible to



enter the cave from the shore without swimming or using a boat (Tony Boycott swam in, 20 August). Fortunately, MacCulloch's description of a visit to Cormorants' Cave, on the northeast face of this peninsula, recorded a passage from this cave into the back of McKinnon's Cave which was passable at low tide. It was just possible to locate the entrance to Cormorants' Cave from above but the sheer cliffs at this point with no real rebate meant the straight cliff edge gave no good views of the cave entrance. At high tide, the entrance was a mass of surging water. These caves have therefore to be investigated at low tide from the shore.

**McKinnon's Cave** (Uamh nan McKinnon)

NM 32339,35137

**Cormorants' Cave** (Uamh nan Broigheal)

NM 32379,35071

The entrance to Cormorants' Cave or Scart's Cave (from the birds nesting in it at high level\*) is a cleft 7-8 m wide and 15-20 m high cut into the cliff which can be reached at low tide along the shore from Port an Fhasgaidh. The beach of large stones is slippery with weed and the best route is along the ash shelf at the base of the cliff dropping to the tidal beach at the far end.

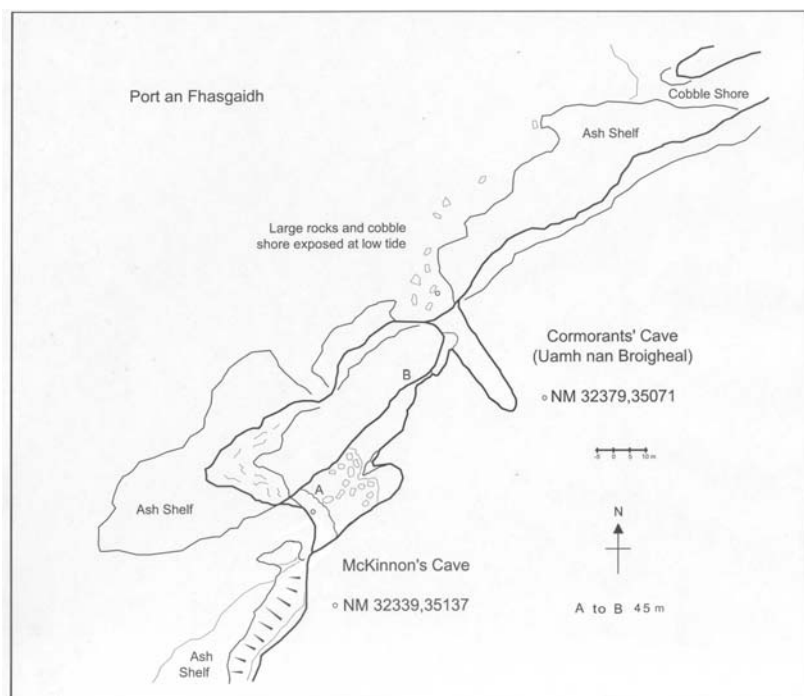
The beach continues into the cave, part boulders and shingle and part bedrock, sloping at 3-5°. It is approx-

\* Scart being the Scots word for scratch or scrape but also for a poor looking creature describing the scrawny look of the long necked Cormorant.

imately 35m to the back of cave, where the ceiling slopes down to meet the floor, with the walls closing in gradually to a rounded end (1.5m high and approx. 2m wide). At the entrance, the north-east side of the cave is fissured with the possibility of short passages at high level. About 2m in, across a 1m deep tidal pool to the southwest, is the narrow passageway at 90° to Cormorants' Cave, leading to McKinnon's Cave. To the west of Cormorants' Cave the ash shelf continuing round the headland. The shelf is cut 30m along by another inlet forming a slight undercut in the cliff but no cave. This inlet prevented access along the shelf to the southwest of McKinnon's Cave.



*Cormorant's Cave from Port an Fhasgaidh*

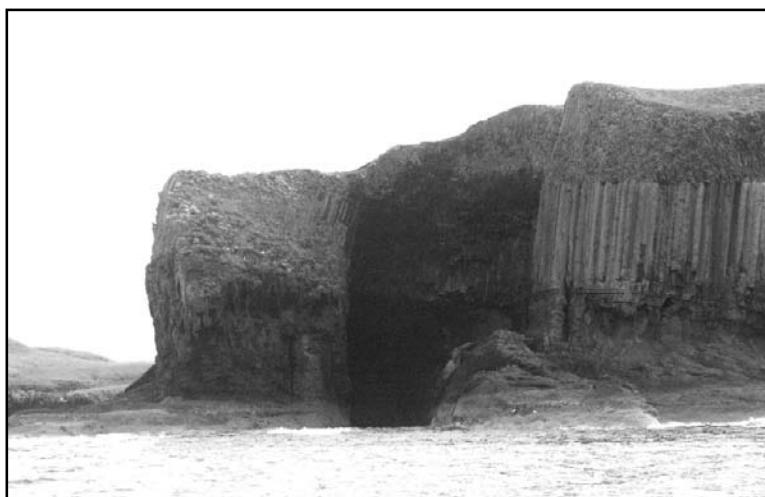


An initial late night visit to Cormorants' Cave, by the whole team (18 August), was followed up by a solo visit by Jrat (20 August), joined later in McKinnon's Cave by Tony Boycott. A tape, compass and clinometer survey was carried out by Jrat, Tony Boycott and John Crae (21 August). The partially flooded passage (3 m long, 1.5m wide and about 3 m high) ends in a 1.2 m high shelf with a 0.5m wide passage above. A vein of 'quartz' can be seen on the south wall which continues in a band of light coloured rock in McKinnon's Cave. The floor of the wider passage is shingle with the depth increasing sharply from 0.8 m along the northwest wall to 1.2 m to the southeast. Another 5 m of rift continue beyond the shelf and a slight dogleg before the cave opens out into the back of McKinnon's Cave. Water forced by the tide

through this rift has carved a channel appearing like a 2.5m high vadose passage. Within the rift, there are narrow openings above possibly leading to an upper level of passages. McKinnon's Cave is quite impressive, made more so by its restricted access. Although not as long as Fingal's Cave (about 40 m) it is easily half as wide again (approx. 20 m) and at low tide the beach of large stones interspersed with huge boulders is covered in sponges and anemones (and the occasional large crab). The wide entrance splits into two roughly triangular branches with a protruding mass of ash shelf between. Southeast of the main chamber (10-12m wide) which leads back to the connecting passage was a second smaller more rounded chamber (7-8m wide) sloping steeply up to the ceiling. Above the connecting passage are some holes, possibly connecting with an upper passage at high level.

The view over Port an Fhasgaidh from above Cormorants' Cave gives suggestive hints of caves along the base of the cliffs to the north. While these are unlikely to be deep consisting probably of shallow undercuts at the base of the cliff, in places they have been overlain by rock falls from above. There could therefore be some linear features along the foot of the cliff.

From Port an Fhasgaidh to a point 200m north of Clamshell Cave, the southern quarter of the island is separated from the rest by a slot running across the island following a fault line, possibly widened by the action of waves or ice. The south side of this slot is a continuation of the cliffs at Cormorant's Cave. North of Port



*McKinnon's Cave*



*McKinnon's Cave from above*

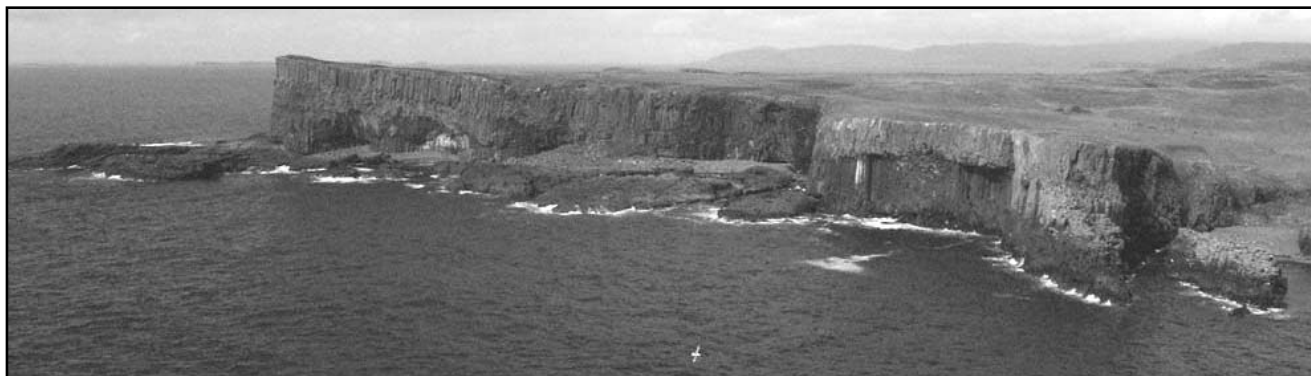
an an Fhasgaidh is another area of large basalt columns forming a small island in the bay and a short promontory mimicking The Causeway at Fingal's Cave although on a much smaller scale. To the north of this promontory below the west facing cliffs is the unusual cave, Gunnar Mor. This feature can be reached even at mid-tide by the more adventurous explorer as the basalt columns along the north side of Port an Fhasgaidh can be traversed just above the water line to reach the promontory and, although steeper, the cliff face to the north can also be traversed for a short distance.

**Gunnar Mor** (The Cannon or literally the big gun)

NM 32393,35345

Initial visits were made to Gunnar Mor by the whole survey team (18 August) and on a further visit (21 August) by Jrat, Tony Boycott and John Crae, it was quickly measured. The 20-30m climb along steeply stepping broken columns at the base of the cliff from the pebble beach at Port an Fhasgaidh, opens onto a small section of columnar pavement with a view across the bay to Cormorants' Cave. Steeper columns, to the north, give enough space to climb around the corner of the cliff. 2-3m along the western facing cliff and approximately 5m up from the beach, on steeply stepping basalt columns, is a 1m high hole with a small (400 mm round, 400 mm deep) pool at the entrance. There was, until the late 19th or early 20th century, a 5 lb stone in this hole, probably a 'cave' pearl, but the stone has been removed. Within the entrance, in volcanic slag with quartz inclusions, 5 m of roughly circular passage climbs at 40 degrees into the basalt cliff. The crumbly red stone in the passage resembles fossilised bird droppings but the exact composition is not yet known.

It is possible to climb another 20m, along cliff, before it becomes too vertical, or at low tide, descend to the shore of large rounded stones covered in seaweed. 50 m north, this beach is interrupted by another area of ash shelf. With climbing equipment, it would be possible to climb the 2.5m high shelf but unaided the steep



*North of Port an Fhasgaidh*

rock face (mostly vertical and in some places undercut) is too smooth. Once on the ash shelf, it would be possible to reach the features at the base of the cliff to the north but, due to lack of time, it was not possible during this trip.

The featureless interior of Staffa on the OS map reflects an inaccurate impression of a barren waste. North of the fault line are signs of cultivation with drainage ditches crossing ridge and furrow ploughing. North of this, on the slopes of a small hillock are the ruins of a cottage, two smaller structures and a circular feature (probably a pen for animals) under a covering of grass. McKinnon's Cave Settlement (probably named after the misplaced cave on the 1876 map (**Potential Un-named Cave 2**, NM 32372,35481), is the ruin of the island's only permanent residence - home of the herdsman who looked after cattle brought from Iona in the summer months. The ruins were surveyed by Rees and McKeand in 1996. East of this, in the lea of a rocky knoll near the centre of the island, are the remains of a sheiling with walls extending towards the settlement and the east shore (Rees mentions another sheiling but this is hidden by grass). In this limited shelter, the expedition pitched camp. Five tents were erected north of the sheiling with Jrat opting for a spot inside the sheiling. Some drinking water was carried onto the island in 25 litre plastic bottles but this was supplemented by water from a spring - actually a collection point for drainage from the cultivated area, gathered in a marsh, before emerging down a concrete gully into a drum. The weather during the expedition was dry and the spring remained flowing, but it might not after a dry summer.



*North of Clamshell Cave*

On the east side of the island, between the fault line and Clamshell Cave, the columns of the cliff form a scalloped surface, called 'The Quarry', with basins of almost horizontal curved pillars forming a staircase down to the shore. The shoreline itself consists of rocky outcrops with no obvious clefts and although it was not physically explored, it is clearly visible from the sea and contains no openings worth investigating.

Several gullies lead down to the eastern shoreline but while their ends show some undercutting, there are no caves. In places, basalt masses have been separated from the cliffs

forming islands at high tide. Northeast of the sheiling, Goat Cave can be seen from the cliffs. The holes in the grass bank here are Puffins' nests although, by August, the birds had flown. A grassy slope south of the cave drops to a raised beach, north of which there is a steep climb down a 2-2.5 m rock face to the south side of the cave. At low tide, there is enough shingle beach to reach the cave without getting your feet wet. At the base of the rock shelf, a narrow cleft dead ends at a shallow (0.5m) undercut, south of the main cave. A very low undercutting in the north side of this cleft may possibly be a eyehole to the main inlet. (Wrens were chasing sand flies into a 0.1 m crack at ground level and not reappearing. A similar crack - with wren's and flies - appears south of the main cave) .

### **Goat Cave (Uamh nan Gabhar)**

NM 32682,35655

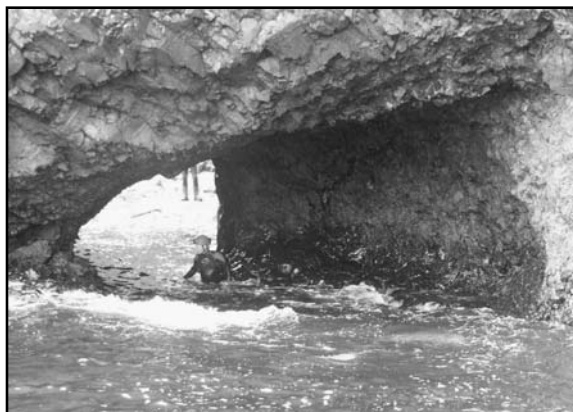


*Goat Cave and Un-named Cave 9*

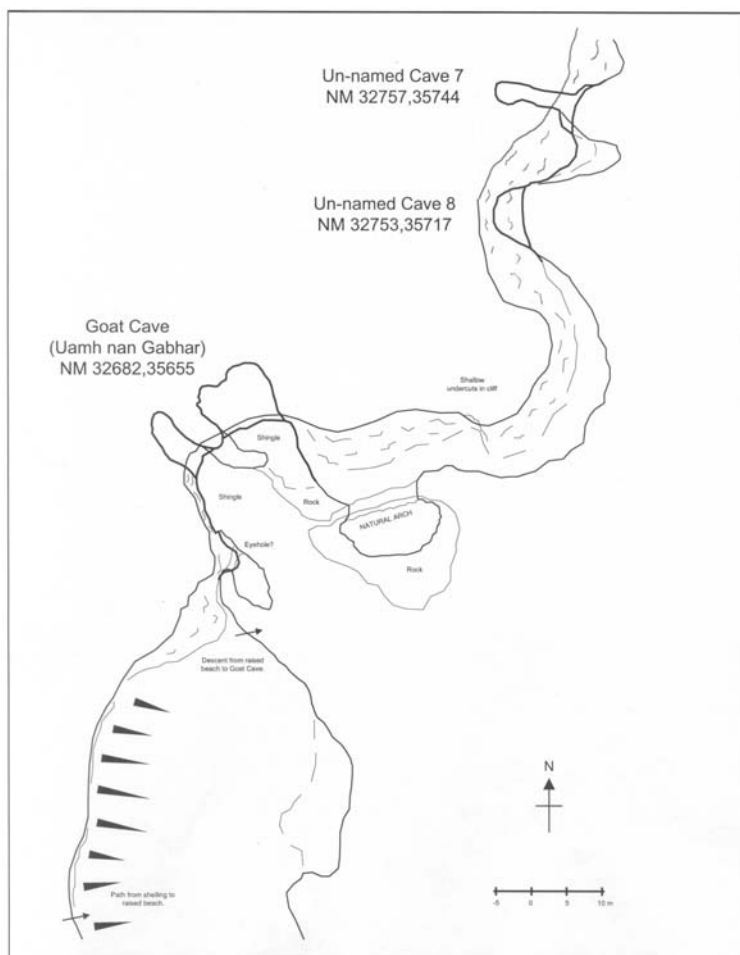
Shown on the latest OS map (1:10,000, 2004) as one cave, there are actually two caves here confirming the detail shown on older maps. The south cave (Goat Cave) has a 15 m long passage, 4-5 m wide and 4 m high, with a roughly triangular cross-section while the north cave (**Un-named Cave 9**, NM 32752,35735) is more rounded with a 10 m wide, 4.5 m high entrance into a 15 m deep chamber. Two areas of undercutting scallop the back of this chamber. A survey of these caves was made with tape, compass and clino (19 August) by Jrat, Duncan Butler and Tony Boycott, photographs by John Crae.

To the east of Goat Cave, a rock bridge has been formed through a rocky promontory (NM 32719,35647). It is possible to wade through the 1 m deep water or to climb along the rock slope above to reach the shore beyond. There is approximately 10 m of 2-3 m wide and 2m high passage with shallow under-cuttings along the south wall banging as the waves slap into the voids (possibly at the junction of the upper and lower layers of basalt).

North of Goat Cave is Meallan Fullan, the second named hill on Staffa, although not particularly high. Translations from the Gaelic vary from the prosaic 'Little Hill of the Seagulls' (Meallan Faoillean) to more speculative translations. 30 m along the rocky shore at the foot of the cliffs (on a 45° slope with good footholds) and around a headland is a short cave (**Un-named Cave 8**, NM 32753,35717). Little more than a deep undercutting 4 m high, 6 m wide and 5 m deep, it was assumed (19 August) to be one of the caves marked on the latest OS map (on checking, this was not in the right place and further investigation was required).



*Rock Bridge*



A second visit was made (20 August) as the tide was receding and continuing along the rocky shore (60° slope with adequate footholds) about 10-15 m, north of the promontory beyond Un-named Cave 8, was a larger cave (**Un-named Cave 7**, NM 32757,35744). This is about 7 m wide and 10 m high, closing rapidly to 3m high and 1.2m wide, then gradually decreasing to nothing at the end of a 15 m long passage. Within the wide entrance, a fan of basalt columns is draped over the underlying rock which was eroded to form the cave. With the tide out, it was possible to get across the mouth of Un-named Cave 8 dry and to enter the Un-named Cave 7 however even at low tide



*Un-named Cave 7*

there was water at the vertical north side of this cave (about 300-500 mm deep). In good weather, it might be possible to wade across and continue north to another cave marked on the OS map (**Un-named Cave 6**, NM 32760,35812), which has not yet been investigated but time ran out in 2005. The three caves below Meallan Fulann are not visible or accessible from the grassy slopes of Meallan Fullan which curve down sharply onto the irregular basalt cliffs.

On the northwest of the island, a grassy escarpment drops to another raised beach where small boats once landed tourists arriving from paddle steamers. Here, the rock shelf is split by furrows and inlets where it is eroded by the sea. The OS map showed a cave at the east end of this shelf (**Un-named Cave 5**, NM 32695,35879) which was discovered (18 August) at the end of a large twisting inlet. The whole cave, 5m wide, 4m high and 6m deep is visible from above with a white sand beach at low tide. To the northeast, in the same tidal inlet, a small rock bridge connects to another inlet and the surging waves create a rapidly reversing flow. The other inlets along the north shore ended without any caves.

At the northwest corner of Staffa is the tiny island of Eilean Dubh formed from huge basalt columns but difficult to reach due to deep water and strong currents. South of this, a promontory of smaller columns is separated from the main rock shelf by a narrow crack. In the depths of this is concealed a small rock bridge (NM 32596,35986). South of this, a notch in the cliff is marked on the OS map as a cave (**Un named Cave 4**, NM 32592,35964), however from the rock to the north, it was possible to look into the inlet to see a stony beach terminating in a vertical rock face. There is no cave at this point.

Another deep inlet, not accessible at high tide, is located approximately 100 m along the cliff, south from Eilean Dubh. The initial cliff top inspection (Thursday 18 August) could not tell the depth of the cave but the surging water at the entrance implied there was at least some passage. This cave (**Un named Cave 3**) was noted but exploration was left until later.



*Cliff South of Float Cave*

Much more impressive was the wide bay midway along the north western cliffs. From the promontory to the north and the cliffs to the south, the mouth of a wide cave could be seen spanning at least 30m but the back of the cave was not obvious. Access to this appeared very difficult involving either a long trip along the shore at low tide or a ladder descent down the cliffs. The cliff top above this cave was investigated (Saturday 20 August). The most promising routes for a climb down the cliff were rejected as the rock appeared loose with steep drops below so it was assumed that a ladder was necessary to drop down the cliff.

The soil was thin on the top of the cliff but it was possible to drive 1 m anchors deep enough into the matted grass surface to give secure fixings for ropes and ladders. All team members were involved in rigging the 15 m pitch (21 August) allowing Jrat, Tony Boycott and Duncan Butler to drop onto a sloping ledge about 10 m above the sea, southwest of the cave. Access along this ledge led to the cave entrance, which was surveyed by Jrat and Tony.

**Float Cave** (Uamh nan Fleodradh)

NM 32423,35741

The cave mouth is approximately 45 m wide and 10 m high opening into a large chamber with a ceiling sloping down to the rear of the cave about 30 m back. To the south a smaller chamber is separated from the main cave only by its lower ceiling. The wide rock beach is scattered with driftwood and fishing floats. C. Kilpatrick of the 'Iolaire' confirmed later that boats had been used to rescue fallen sheep from this cave and that at times it was covered in otter droppings.

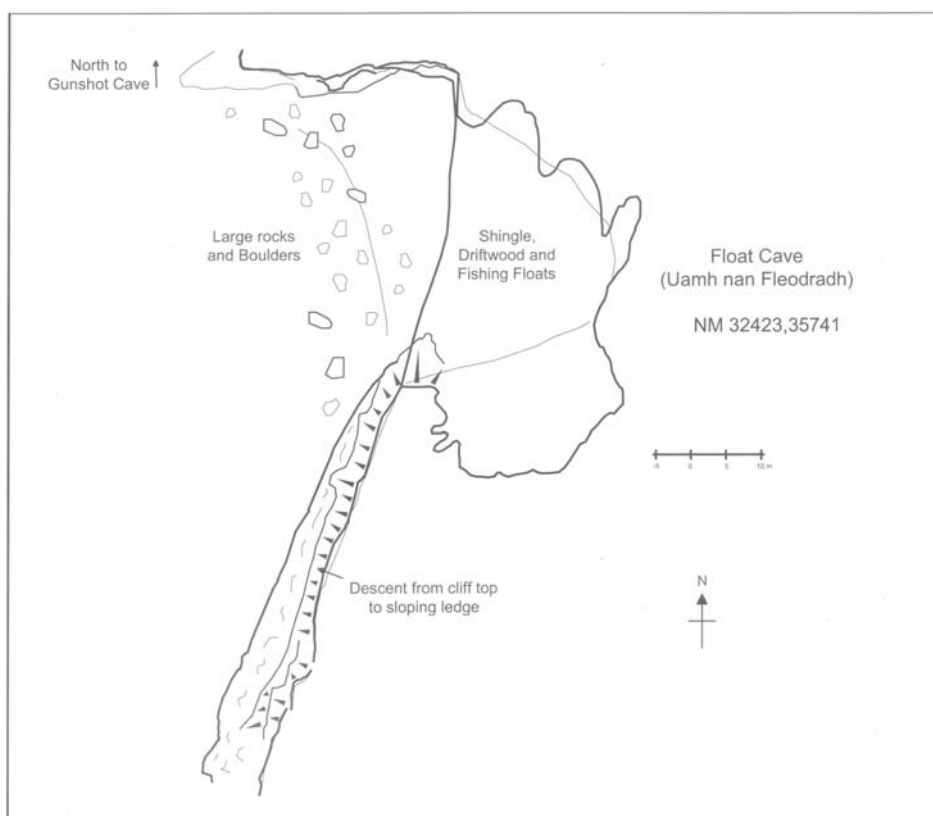
While Jrat and Tony Boycott surveyed Float Cave, by traversing along the cliff to the northwest, Duncan Butler (and later Tony Boycott) explored north along the tidal platform to the deep inlet spotted from the cliffs on Thursday. South of the deep inlet, was another smaller cave (**Gunshot Cave**, NM 32522,35985). This 6-7m wide 5-6m deep and 5m high cave had a rock beach which was almost but not quite dry at low tide.

Climbing along the cliff over this cave to the deep inlet (**Un named cave 3**, NM 32517,35928) revealed at least 40 m of passage, 5-7m wide and 10-12 m high with deep water even at low tide.



*Float Cave (Uamh nan Fleodradh)*

Although the expedition was cut short by the news of an incoming weather front, the expedition's major goals were achieved. The main caves were explored and surveyed (to level 4-5), and most of the other caves were located and explored. It remains for other expeditions to fill in more detail in the surveys, to explore the remaining stretches of coastline (to un named caves 2 and 6 and the potential caves in the cliffs north of Port an Fhasgaidh) and the upper reach-



es of McKinnon's/Cormorants' Cave. Problems were minor and not insurmountable. Overall the weather could not have been better. Midges, although briefly active, were mostly kept at bay by ocean breezes. The sand flies and other insect life were only active when disturbed although there seemed no lack of spiders entering the expedition's tents. Other expeditions should note however that lack of water, lack of shelter, ocean swells and high winds could cause considerable problems in less favourable weather.

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## Acknowledgements

Bob Mehew, Tony Jarratt, Tony Boycott, Duncan Butler and Vern Freeman for their information and their experience on the trip. Chris Kilpatrick for local knowledge, weather data and for allowing us to ferry equipment on his boat. And everyone who helped to supply equipment and materials. Special thanks to Bob for assisting with the extensive revisions.

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#### **PUBLICATIONS FROM THE GSG:**

Over the years, the Grampian Speleological Group have produced a large number of speleological publications, many of them no longer available 'off the shelf'. Listed here are those which are either in print or can be supplied on demand by photo-copying masters.

#### **Bulletins:**

A number of past Bulletins are held for sale at £2 each. Enquire for specific issues. Indices for first three series £4 each.

#### **Occasional Publications:**

- Caves of Assynt. 2nd Edition. Photocopy available @ £8.50 [3rd edition in prep]  
Caves of Skye. £8.50  
Caving Songs of Mendip. 2nd Edition. Photocopy available @ £4.00  
Caves of Schichallion. Photocopy available @ £4 [2nd edition in prep]

#### **Special Publications:**

- Appin Cave Guide. (1977) Photocopy available @ £2  
Appin Cave Guide Supplement (2003) £2.50  
Caves of the Southern Highlands. £1.50  
Buddy Reading (Caving in couplets) £2.50  
Sutherland Hut Logs. [Knockan] Vol.1 (1977-1991) £10 ;Vol. 2 (1991-1994);  
[Elphin] Vol. 3 (1994-1997); Vol. 4 (1997-2000); Vol. 5 (2001-2004) £6 each.

Index to Glasgow and Ayrshire Speleological Societies Publications. £4

Index to the Speleologist (1965-1969 edition) £4

Index to the Speleologist (1953-57 edition) £3

Index to Northern Caving (1964) £2

Index to Caving International (1978-1982) £4

Transcript of GSG Bulletins, 1st Series Vols.1,2 (1963-66) £7

Transcript of GSG Bulletins, 1st Series Vols.3,4 (1966-71) £10

Index to SWETCC Publications *in prep.*

All prices quoted are for non-members. Postage extra. Enquiries to GSG, address in front cover.

**SEAFIELD CAVE, KINGHORN, FIFE**

By Alan L. Jeffreys

Seafield Cave is one of the more interesting sites along the southern shore of Fife, where a selection of caves is found in Old Red Sandstone outcropping onto a raised beach. It lies in a pronounced canyon just at the limit of normal tidal range, approximately half a kilometre south of the ruined Seafield Tower, itself built on the raised beach. Although there is a green track leading to this ruin from the A921 at Seafield House, and



**Entrance to Seafield Cave, March 2006, showing footpath bridge.**

**Photo: A. Jeffreys**

thence by pathway to the cave, progress is rudely interrupted by the main Kirkcaldy to Edinburgh railway line and a safer approach would be by following a well-used public path from Kinghorn sea front (where there is also car parking). Care is required on the beach in front of the cave as algae on the rocks makes them dangerously slippery.

The cave extends due west into the hillside and may in antiquity have been somewhat longer as a deeply developed trench precedes actual cave passage, maintaining generally the same dimensions. It bisects the public path on the raised beach, entailing construction of a metal bridge to span the canyon. Since it is 40 years since I was last at the place, I assume this to be a fairly modern

replacement. Older iron chains and railings which used to adorn the site seem to have rotted away, for they were not in evidence in 2006. To be fair though, the tide was just going out, only exposing some 30 metres of rock beach and the fittings may have been submerged.

Cave development appears to have occurred due to a joint or fault in the sandstone, evident as a shallow valley above and beyond the entrance; a trail of shaly extrusions along the roof also indicates a line of weakness. Some calciferous material within the sandstones has given rise to displays of rotten flowstone on passage walls, particularly on the right hand side.

Just inside the entrance there is a one metre climb up onto a floor formed of clay and rubble. This climb has the appearance of a wall, but in fact is merely a point where high tides have eroded fill for which the cave is notable. Obviously sea water still reaches this area as piles of the customary rubbish are to be found here. Dribbles of water fall from vegetated cover above.

The main passage is of handsome dimensions, sometimes five metres in height and averaging two metres in width. It extends for 22 metres, with a long, shallow but muddy pool six metres in length on the floor. At the inner end, both walls sweep

**Looking out of the entrance from the 1 metre step. Note tidal rubbish.**

**Photo: A. Jeffreys**



back to reveal a large chamber, 13 metres wide, with a floor of sticky mud rising steeply to meet the roof at the back of the chamber 12 metres further in. Access to the bitter end may be made without stooping. On the left just inside the chamber, an undercut wall appears to offer more passage but it rapidly becomes too tight.

Just how and where this mass of mud came into the cave is an unsolved enigma. Examination of the ceiling reveals no obvious communication with the surface (unless covered by the muck) and it is clearly of inland, rather than tidal, origin. According to Oldham<sup>(1)</sup> there is evidence of mining in Seafield Cave - I was unable to find any - but this could explain the one metre 'wall' at the entrance if loads of earth and mud were removed from the passage floor which is, indeed, remarkably flat and comfortable. No real signs of human habitation could be found but the cave is pleasantly free of graffiti and vandalism which plagues other sites at East Wemyss a short distance to the north.

The club first visited Seafield Cave in Spring 1966 when it was surveyed to CRG Grade 4 by the writer, Peter MacNab and Murdoch MacLeod. I am not aware of any subsequent plans, and since ours has only been reproduced in simple format<sup>(1)</sup> I thought it might be appropriate to publish it here.

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**Main passage looking out from edge of Main Chamber.  
Photo: A. Jeffreys**

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#### **ELPHIN CAVING CHALET (Taigh nam Famh):**

The Grampian Speleological Group own a spacious and well-appointed caving chalet at Elphin village, 14 miles north of Ullapool in the heart of Assynt's caving region, which is available for hire by visiting cavers. Fully equipped kitchen, two bunk rooms, two hot showers, drying room, conservatory, car parking and limited camping area.

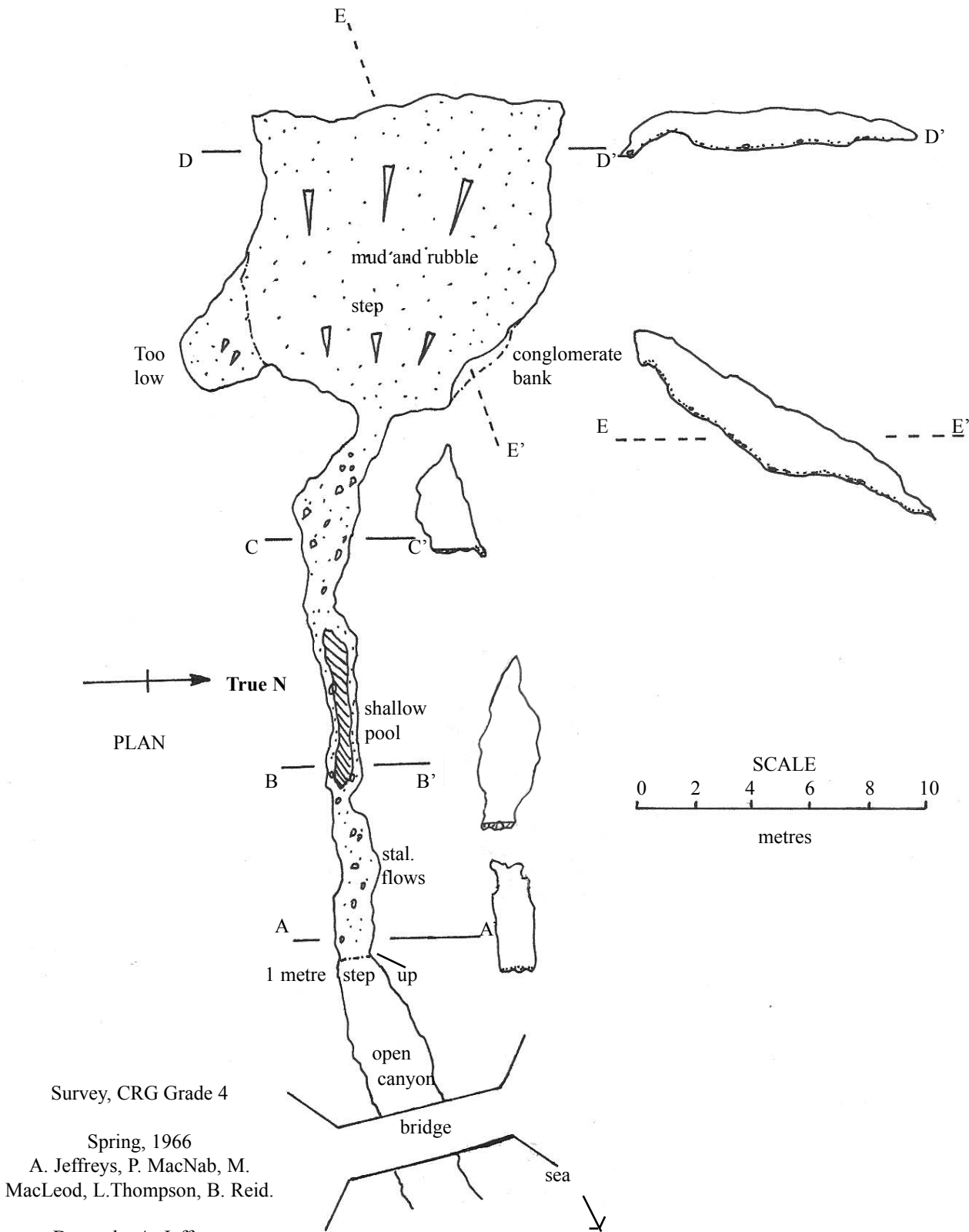
Charges: (Non-Members): £5 per night per person reduced to £3 for children, students and OAPs. [There are concessionary rates for members of the Bristol Exploration Club and Bradford Pothole Club].

For further details, contact the Hut Warden Peter Dowswell on 01463 229250, [hutbookings@gsg.org.uk](mailto:hutbookings@gsg.org.uk)

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**SEAFIELD CAVE**  
**Kinghorn Fife**  
**NGR: NT 278 880**  
**Alt 0-1 metre**  
**Length: 35 metres**

Passage  
Cross-Sections



THE GRAMPIAN SPELEOLOGICAL GROUP  
BULLETIN

INDEX TO FOURTH SERIES VOLUME 2 Nos. 1-5

**Vol.1 No.1** **March 2004**

Editorial	3
Area Meet Reports	3
More on Early Caving in Assynt	5
Some Grid References in Appin	6
Additions to the Library	7
Beyond the Squeeze (Poem)	10
Tyndrum Lead Mines	13
2003 Exploration in Austria	21
Gaelic Topological Glossary	27
Notes on Making Your Own Caving Lamp	31
Meet Report: Diving in Sutherland	33
Albion Pot - Possible Access to a Master Cave in Glen Duror?	35
Jeanie Barrie's Cave. An Overview	36
Report of Water Tracing in the Inchnadamph Area	44

**Vol.2 No.2** **October 2004**

Editorial	3
Area Meet Reports	4
Additions to the Library	7
Caves on North and South Uist	10
Cave Dives on Skye	11
Two Tiny Sutherland Caves	13
The Black and White Caves of Barlocco	15
Fave Caves	18
Of Boulder Chokes, Bats and Irish Musicians - Meghalaya 2004	19
Something for the Weekend Sir?	29
Two Inhabited Caves in Scotland	34
More Mine Hunting in Galloway	36
CD and Book Review	37
Uamh an Ard Achadh. A Window on the Prehistory of Strath, Skye	39

**Vol.2 No.3** **March 2005**

Editorial	3
Area Meet Reports	4
Meet Report: Fairy Cave, Luinig	7
Additions to the Library	8
Getting Damp in Draenen	11
Big Hopes for Little Igloos	12
Scottish Speleophilately	13

Uamh an Rìgh (Cave of the Kings), Kishorn	16
Book Review: 'It's Only a Game'	18
Craiglea Slate Quarry, Perthshire	19
Scottish Cave Ephemera	26
A Trip to Anguilla	27
Meet Note: St. George's Cave, Assynt	31
Grutas de Calcehtok, Yucatan	32
Meet Note: Limestone Mine, Bridge of Weir	36
Skye High (and Low)	37
Vancouver Island Adventures 2004	40

**Vol.2 No.4****October, 2005**

Editorial	3
Meet Reports	4
A Homage to Chapel-le-Dale (Poem)	7
Additions to the Library	8
The Stalactite Cave, Arbroath, Angus	11
Another Update to Bibliography of Articles of Speleological Interest in the Scots Magazine	13
Cave or Grave?	14
'Cobblers to the Wessex' - Traversing the Verneau	15
Some Karst Sites at Heaste, Skye	17
Caves of Kishorn	18
Some Caving Notes	25
The Club Library	32
Cave Spotting in the Berchtesgadener Alps	33
The Cuil Dubh System - Revealed Once More	34
Under a Dark Skye	39
Cundy Mole Cave	41
Why Aren't All Deep Caves Hot?	42
Caving in the Abode of the Clouds 2005	45
Meghalaya 2005 - Discoveries in the Jaintia and West Khasi Hills	47

**Vol.2 No.5****March 2006**

Editorial	3
Meet Reports	4
Additions to the Library	7
Vale: John Cornwell	9
Visit to La Cueva de San Marcos, Tenerife	9
Scotland's First Cave Book	10
Scottish Cave Rescue - An Update	13
Meet Report: Two Pyrenean Caves	14
A Survey of Elphin Hole	15
Caves, Crevices and Conundrums	18
More About the Cavern in Glen Crae/Croe	25
Radiolocation Using the Heyphone at High Pasture Cave	28
The Mysterious Case of the Disappearing Cave	30
Ossianic Endeavours - Exploring Caves on Staffa	34

Publications from the GSG  
Seafield Cave, Fife

47

48

58  
GRAMPIAN SPELEOLOGICAL GROUP  
BULLETIN

LIST OF PLANS AND ILLUSTRATIONS, FOURTH SERIES VOLUME 2 Nos. 1-5

**Vol.2 No.1**

**March 2004**

R. Biddle and E. Glen at Burrington Combe, Photo.	Cover
Tyndrum Lead Mine, Lowest Level, Photo.	13
Tyndrum Lead Mines, Fence Notice, Photo.	13
Tyndrum Lead Mines, Site 3, Photo.	14
Tyndrum Lead Mines, Inside New Level, Photo.	14
Tyndrum Lead Mines, Climb in Site 5. Photo.	15
Tyndrum Lead Mines, Entrance to site 7. Photo.	15
Tyndrum Lead Mines, Entrance, site 8. Photo.	16
Tyndrum Lead Mines, Timbers in New Level. Photo.1	16
Tyndrum Lead Mines, Vein in New Level. Photo.	17
Tyndrum Lead Mines, Ore Chute, New Level. Photo.	17
Tyndrum Lead Mines, List of Workings. Table	18
Tyndrum Lead Mines, Area Map	19
Tyndrum Lead Mines, Area Plan and Plan of New Level	20
Lichkegkschacht, Austria, Rigging Diagram	21
Barenlucke, Austria, Survey	22
Club Members at Jeanie Barrie's Cave, 1965. Photo.	23
Albion Pot, Argyll, Entrance. Photo.	24
Albion Pot, Argyll, Members at site. Photo.	24
Cults Limestone Mine, Fife, Passage View. Photo.	25
A.N.U.S. Cave, Rescue Practice. Photo.	25
Tyndrum Lead Mines. New Level. Photo.	26
Draught Caledonian, Argyll, Stream Passage. Photo.	26
Lamp Fitting for Rear of Helmet. Photo.	31
Chinstrap Fitting for Helmet. Photo.	32
Cnoc nan Uamh, Sump Extension. Survey	34
Albion Pot, Survey.	35
Jeanie Barrie's Cave, Entrance 1965. Photo.	36
Jeanie Barrie's Cave, '7 Cauldrons'. Photo.	37
Jeanie Barrie's Cave, Gruffy Ground. Photo.	37
Jeanie Barrie's Cave, First Crawl, 1965. Photo.	38
Jeanie Barrie's Cave, Chute Crawl, 1965. Photo.	38
Jeanie Barrie's Cave, 1st Shakehole Dig, 1965. Photo.	40
Cave of the Dreaded Hendersons, Entrance. Photo.	41
Jeanie Barrie's Cave, 1st Crawl, 1965. Photo.	42
Jeanie Barrie's Cave. Survey	43
Lycopodium Spore Concentration Sutherland. Diagram	45
Water Tracing Results, Sutherland. Maps	46

**Vol.2 No.2**

**October 2004**

Swildon's Hole, Entrance with Cavers in Bathing Suits. Photo.	Cover
Beinn an Dubhaich, Skye, Sump Extension Survey	12

Pretty Pol, Sutherland, Photo.	13
Pretty Pol, Survey	14
Bernie's Bolt Hole, Photo.	14
Bernie's Bolt Hole, Sutherland, Survey	14
Barlocco Bay, Area Map	15
White and Black Caves, Barlocco. Photo.	16
Black Cave Interior. Photo.	16
Easternmost Cave at Barlocco, Photo.	16
Barlocco, Cave Locations. Map	16
Barlocco, Cave Locations. Map	18
Meghalaya, Team Photo.	19
India, Map	20
Meghalaya, Map	20
Krem Bun, Main Pitch. Photo.	21
Krem Um In 2, Quentin Cooper with rope. Photo.	21
Krem Um In 1, Tigermouth Pitch. Photo.	22
Cnoc nan Uamh, School Party in Grotto. Photo.	23
Pretty Pol, Looking out of cave. Photo.	23
White Cave of Barlocco. Photo.	24
View of Shnongrim Ridge. Photo.	24
Krem Um In 1, Tigermouth Pitch. Photo.	25
Krem Um In 2. Formations in Passage. Photo.	25
Outside High Pasture Cave, Skye. Photo.	26
High Pasture Cave, Main Stream Passage. Photo.	26
Krem Wah Tillian, Bolt Fixing. Photo.	27
Heteropoda Spider, Meghalaya. Photo.	28
Cave Dwelling near Ardwell. Photo.	34
Sheep Rink Cave, Ardwell. Photo.	35
Grimm's Cave, Muchalls. Photo.	35
Entrance to Cave Dwelling, Muchalls. Photo.	35
Auchencairn, Area Map	36
CD Cover: Dangerous Dick and the Duckbusters. Photo.	37
High Pasture Cave, Surface Features. Map	40
High Pasture Cave, Survey	41
Wet-sieving Equipment at High Pasture Cave, Photo.	41
High Pasture Cave, Trench 1. Diagram	42
Antler Pick, High Pasture Cave. Photo.	42
Brown Bear Canine, High Pasture Cave. Photo.	43
Perwinkle Midden, High Pasture Cave. Photo.	43
Radio-locating at High Pasture Cave. Photo.	44
Iron Age Pottery, High Pasture Cave. Photo.	45
Antler Plate, High Pasture Cave. Photo.	46

**Vol.2 No.3****March 2005**

Wine and Cheese Party, Sunset Hole. Photo.	Cover
Little Igloo, Uamh an Claonaite, Survey	12
Scottish Cave Postage Stamps. Photos.	13
Post Office Frank Stamp. Diagram	13
Scottish Cave Postage Stamps. Photos.	14
Scottish Cave Postage Stamps. Photos.	15
Kishorn, Area Map	16

Cave of the Kings, Entrance. Photo.	17
Cave of the Kings, Survey	18
Craiglea Slate Quarry, General View. Photo.	19
Craiglea Slate Quarry, Tunnel Entrance. Photo.	20
Craiglea Slate Quarry, View of Bench. Photo.	20
Uamh nan Claig-ionn, Main Chamber 1977. Photo.	21
Allt a'Chalda Mor, Rescue Practice. Photo.	21
Rana Hole, Rescue Practice. Photo.	21
Juniper Gulf, Traverse. Photo.	22
Jingling Pot, Foot of Main Pitch. Photo.	22
Philpstoun No.6 Shale Mine, Passage. Photo.	23
Coalbog Limestone Mine, Rift Passage. Photo.	23
Coalbog Limestone Mine, Entrance. Photo.	23
GSG Team on Vancouver Island. Photo.	24
Sea Cave, Uckluelet, Vancouver Island. Photo.	24
Craiglea Slate Quarry, Lower Tunnel Entrance. Photo.	25
Craiglea Slate Quarry, Second Tunnel. Photo.	25
Whisky Label, Fingal's Cave. Photo.	26
Anguilla, Katouche Cave. Photos.	27
Anguilla, Drawing of Rodent. Photo.	27
Puerto Rico, Rio Camuy. Photo.	28
Anguilla, Fountain Cavern. Photos.	29
Anguilla, Gavanagh Cave, Photo.	30
Gavanagh Cave, Survey	30
Anguilla Cave, Katouche Cave and Beach. Photos.	30
St. George's Cave, Assynt. Survey	31
Yucatan Peninsula, Map	32
Grutas de Calcehtok, Photos.	33
Mayan Artifacts, Grutas de Calcehtok. Photos.	34
Yucatan, Wildlife. Photos.	35
X-Ray of Infected Lungs. Photo.	36
Red Cuillin, Skye. Photo.	37
Torrin Centre, Skye. Photo.	37
High Pasture Cave. Flood Evidence. Photo.	37
Upper Through Cave, Survey	37
CG32, Entrance Climb, Skye. Photo.	38
High Pasture Cave, Streamway. Photo.	38
Boundary Sink, Skye. Survey	39
Slot Canyon Cave, Vancouver. Photo.	41

**Vol.2 No.4****October 2005**

Fancy Dress in Hillhead Mine. Photo.	Cover
Stalactite Cave, Arbroath. Photo.	11
Flowstone, Stalactite Cave, Arbroath. Photo.	12
Reseau du Verneau, Survey	16
Heretic's Cave, Levitation Squeeze. Photo.	18
Triple Arch Cave, Entrance. Photo.	19
Sink at Cnoc na Creige Cave, Kishorn. Photo.	19
Aten's Chamber, Entrance. Photo.	20
Cnoc na Creige, Entrance. Photo.	21
Kishorn, Cave Locations. Map	22

Triangle Cave, Wee Beastie Cave, Choked Cave. Surveys	23
Heretic's Cave, Cave of the Queens, Cnoc na Creige Cave, Surveys	24
Tullich Mine, Extensions. Survey	25
Blackford Quarry, Dog Rescue 1966. Photo.	27
Blacksmith's Cave, Applecross. Photo.	27
Bone Caves, Assynt, Entrances. Photo.	28
Camas Malag Cave, Waterfall. Photo.	28
Uamh an Righ, Grand Gallery. Photo.	29
Storm Cave, Stream Passage. Photo.	29
Krem Panigundur, Meghalaya. Photo.	30
Krem Mondil Kol, Meghalaya. Photo.	30
Uamh an Gobbha, Survey	31
Applecross, Cave Locations. Map.	31
Club Library. Photo.	32
Storm Cave, Survey	37
Storm Cave, Elevation	38
Condyle Cave, Entrance. Photo.	39
Rowantree Cave, Skye, Survey	40
Condyle Cave, Meekons Cave, Skye, Surveys	41
Cundy Mole Cave, Survey	42
Krubera Cave, Location Map	43
Meghalaya Team 2005. Photo.	47
Um Im 5, Main Passage. Photo.	48
Krem Tyngheng, Dry Passage. Photo.	50
Meghalaya, Cartoon	51
Shnongrim Ridge, Total Cave Passage. Map	52
Mondil Kol, Bat Passage. Photo.	53

**Vol.2 No.5****March 2006**

Must-have Fashion at Allt nan Uamh. Photo.	Cover
La Cueva da San Marcos, Tenerife. Photo.	9
Book Cover: Island of Staffa. Photo.	11
SCRO Logo.	13
Cave Rescue Race. Photo.	13
Rescue Practice, Uamh Duilean Bhriste. Photo.	14
Entrance of Elphin Hole, 1966. Photo.	15
Elphin Hole. Survey	16
Elphin Hole. Elevation	17
The Tube, Meekons Cave, Skye. Photo.	18
Sinks and Caves near CG31, Skye. Map.	19
Hartfield Cave, Entrance. Photo.	20
Triangle Passage, Meekons Cave. Photo.	21
Streamside Cave, Skye. Survey	21
Meekons Cave, Skye. Survey	22
High Pasture Pot 3. Survey	23
Tiny Pot, Skye. Survey	23
Dry Cave, Skye. Survey.	23
West Resurgence Cave. Survey	24
East Resurgence Cave. Survey.	24
Scotia Depicta. Book Cover. Photo.	25

Cavern in Glen Croe. Woodcut	25
Page from Scotia Depicta. Photo.	26
Cavern in Glen Croe. Woodcut	26
Loop Antennae. Photos.	28
High Pasture Cave. Survey	28
Heyphone in High Pasture Cave. Photo.	29
Extra Cave, Ord, Skye. Survey	30
Entrance to Cave, Ord, Skye. Photo.	31
Cave 1, Ord, Skye. Survey	31
Mine 1, Kishorn. Survey	32
Entrance to Mine 2, Kishorn. Photo.	32
Mine 2, Kishorn. Survey	33
Cave Pearls in Mine 2, Kishorn. Photo.	33
Island of Staffa. Photo	34
Island of Staffa. Map	35
Clamshell Cave, Staffa. Survey	36
Curved Columns, Staffa. Photo.	36
Rock Surfaces, Staffa. Photos	37
Fingal's Cave, Staffa. Photos.	38
Fingal's Cave. Survey	38
Boat and Horses Cave, Staffa. Photos	39
Boat Cave and Horses Cave, Staffa. Survey	40
Cormorant's Cave, Staffa. Photo.	41
Cormorant's Cave and McKinnons Cave, Staffa. Survey	41
McKinnon's Cave, Staffa. Photos	42
Island of Staffa. Photo.	42
Shore near Clamshell Cave, Staffa. Photo.	43
Goat Cave, Staffa. Photo.	43
Rock Bridge, Staffa. Photo.	44
Goat Cave, Staffa. Survey	44
Un-named Cave 7, Staffa. Photo.	44
Cliff south of Goat Cave, Staffa. Photo.	45
Float Cave, Staffa. Photo.	46
Float Cave, Staffa. Survey	46
Seafield Cave, Entrance. Photo.	48
Seafield Cave, Entrance canyon. Photo.	48
Seafield Cave, Passage. Photo.	49
Seafield Cave, Survey	50



