

NSS NEWS

May, 1978

Inside

- Articles**
- 95 - Convention Update
 - 99 - Deep/Long Caves Listed
 - 102 - Exploring Bigfoot Cave
 - 110 - Mexican Topographic Maps
- Departments**
- 106 - Region News and Notes
 - 114 - Notes and News

COVER: *Charlie Larson captures VP Rob Stitt (in water) and Jack Hess in Washington's Three Sinks Cave.*



NSS NEWS

Vol. 36, No. 5, May, 1978

The *NSS News* is published monthly by the National Speleological Society, Cave Avenue, Huntsville, Alabama 35810. Subscription rate: \$10.00 per year. Printed in U.S.A. Second Class postage paid at Huntsville, Alabama and at additional mailing offices.

- EDITOR:** Don R. Martin (3796)
Box 3-J, NMSU
Las Cruces, NM 88003
- ADVERTISING MANAGER:** John E. Sweo
Box 3-J, NMSU
Las Cruces, NM 88003
- REGION NEWS EDITOR:** Cheri Casper (12329)
66 Hughes-Ford Road
Sullivan, MO 63080
- REVIEW EDITOR:** Dr. Barry F. Beck (11737)
Earth Sciences Department
Georgia Southwestern College
Americus, GA 31709
- FEATURES EDITORS:** Doug Medville
11762 Indian Ridge Road
Reston, VA 22091
- Richard W. Schreiber
Route 2, Box 6
Rising Fawn, GA 30738
- AREA CORRESPONDENTS:**
- | | | | |
|------------|----------------|------------|---------------|
| AMCS | Jeff Horowitz | NWRA | Bob Brown |
| ARA | Kenrick L. Day | Rocky Mtn. | Blane Colton |
| Central | Kevin Strunk | SERA | Larry Blair |
| Euroregion | Phil Winkler | SWR | Randy Boyd |
| MAR | Randy Hurst | Texas | Dale Pate |
| MVOR | Scott House | VAR | Bonnie Butler |
| NRO | Doug Hauser | Western | Bob Ehr |

NSS OFFICE: Cave Avenue, Huntsville, Alabama 35810 (205) 852-1300

Membership applications and services are available from the Secretary of the Society at the Society Office. President of the NSS is Charles Larson; 13402 N.E. Clark Road; Vancouver, Washington 98665. Phone (206) 573-1782.

Subscription queries and claims for missing issues should be sent to the Society Office. Claims for missing issues will not be honored if received more than 60 days after issue was originally mailed, or for consequence of failure to notify the Office of a change of address.

CHANGES OF ADDRESS: The NSS Office should be notified as soon as possible of impending address changes.

Copyright, May, 1978

National Speleological Society, Inc.

All Rights Reserved

The NSS does not endorse, approve or recommend any equipment offered for sale by advertisers in the *NEWS*.

Graphic assistance was provided by Jeff Lory, NSS 13746.

Memorial Day Weekend—Kentucky Speleofest, Camp Carlson, near Fort Knox on U.S. 60. For more information write to 2122 Millside Drive, Louisville, KY 40223, or call (502) 367-6292.

June 12-16 National Cave Rescue Seminar, San Antonio, TX. For information contact Terry G. Jones, Deputy Director, 16240 San Pedro No. 257, San Antonio, TX 78232. (512) 494-6455.

June 18-24 NSS Convention, New Braunfels, Texas.

July 1-3 SERA Cave Carnival, Coon Holler Campground, Crossville, Tenn.

July 21-23 G.C.G. Annual Meeting, Levi Jackson St. Park, U.S. 25, London, Ky.

Sept. 10-16 International Symposium on Groundwater Biology, Blacksburg, Va. For information contact: Dr. John R. Holsinger, Dept. of Biological Sciences, Old Dominion University, Norfolk, VA 23508.

Sept. 15-17 13th Annual WSS Hodag Hunt, Door County Fairgrounds, Sturgeon Bay, Wis. Contact George Zachariasen, 7340 Portland Ave., Wauwatosa, WI 52313.

International

Sept. 17-24 International Symposium on Karst Hydrology, Budapest, Hungary.

Oct. 7-11 Symposium of the UIS Commission for Speleotherapy, Oberzeiring, Austria.

Write to Gene Hargrove, NSS International Secretary, for more information.

**NEW ADDITIONS
TO THE NSS BOOKSTORE**
NSS Belt Buckle in Pewter Finish: \$7.00
NSS Pin (Military clutch back): \$2.00
NSS BOOKSTORE, Cave Ave.,
Huntsville, AL 35810



Here's all of the latest information about the Society's annual convention!

TEXAS '78



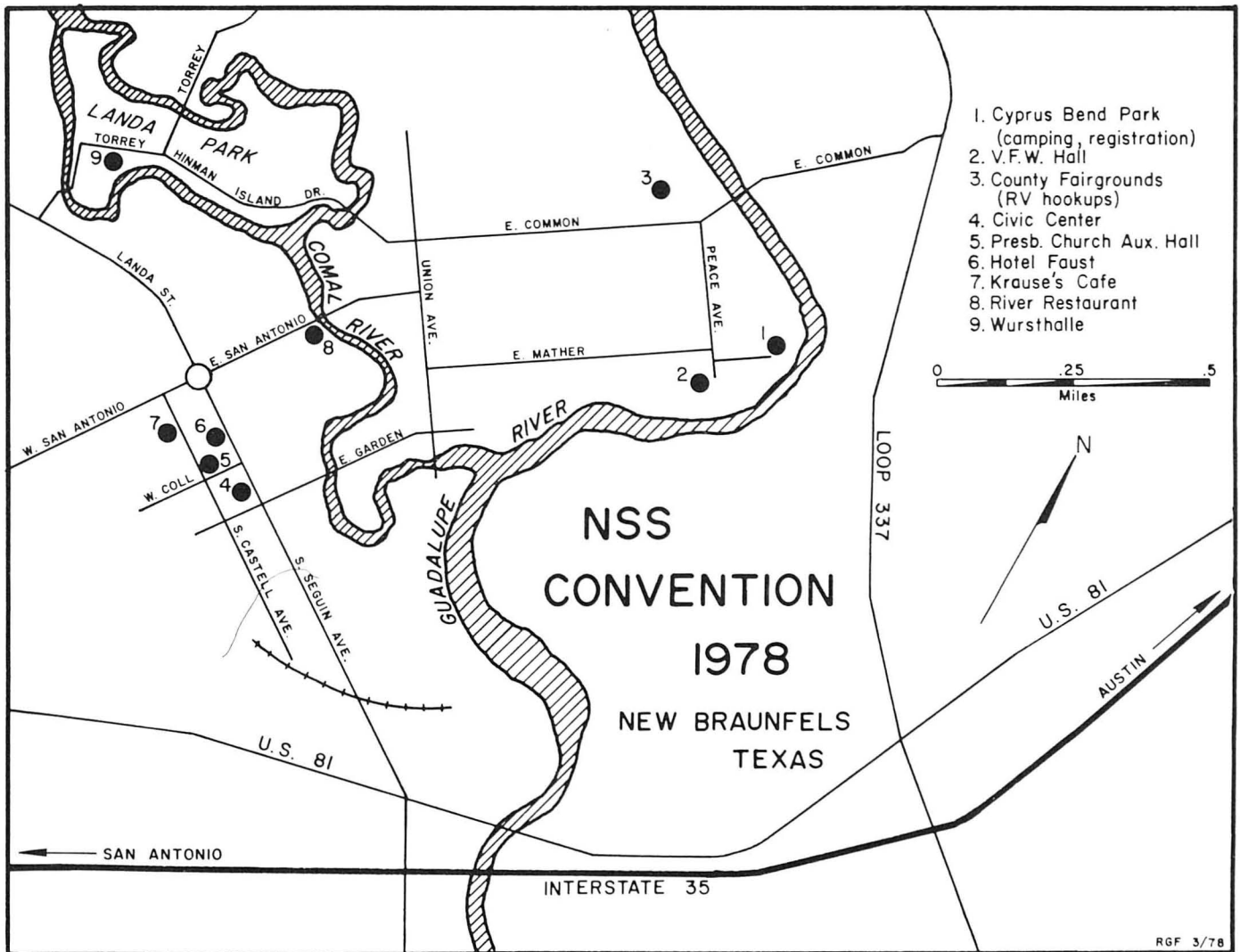
By Ernst Kastning, Karen Kastning and Ronald Fieseler

Getting to the Convention

Most cavers will be arriving by automobile from the north by I-35, from the west by way of I-10 to San Antonio and then I-35, or from the east by I-10 and I-35. The first stop at the convention

should be the registration building at Cypress Bend Park Campground (see Figure 1 and town map). From the north take U.S. 81 exit to Loop 337. Turn right on 337 and turn left onto E. Common Street after one mile. Cross the Guadalupe River and make the first left onto Peace Avenue. Go three blocks to the entrance to Cypress Bend Park.

From the south, take FM 725 exit, go under I-35 onto S. Seguin Avenue. At the traffic circle in the center of town turn right onto E. San Antonio St. Cross the Comal River to a T-intersection, turn right onto Union Avenue. Go three blocks and turn left onto E. Mather St. Continue eight blocks directly to Cypress Bend Park.



New Braunfels

New Braunfels was founded in March, 1845 by Prince Carl zu-Solms-Braunfels and a colony of German immigrants. New Braunfels is located on the Guadalupe River and the base of the Balcones Escarpment. Interstate highway 35 connects New Braunfels with San Antonio, 30 miles to the south, and Austin, 50 miles to the north.

New Braunfels and Comal County are known for their financial stability due to many industries established over the years. The tourist business grew considerably during the 1960's with new motels and new attractions, such as Natural Bridge Caverns, Canyon Lake, and the world-famous Wurstfest held in October. The community has begun extensive projects to preserve the culture brought over from Germany. There are numerous landmarks and historical sites.

Facilities

The 1978 Convention will be using several facilities within the city limits (see town map). The official hotel is Hotel Faust (Figure 2) located downtown and very close to the Civic Center

(Figure 3). Most sessions and events will take place at the Civic Center. Business meetings, such as Board of Governors and Congress of Grottos, will convene at the V.F.W. Hall (Figure 4) near the campground. Vertical caving will be at the Presbyterian Church Auxiliary Hall between Hotel Faust and the Civic Center. The Howdy Party will be at the Comal County Fairgrounds and special luncheons will be served at the River Restaurant. The babysitting service will be at the church.

Convention I.D. Badge

All attendance at convention-planned activities will require the official convention I.D. badge. This badge is your admission ticket for all events and sessions and serves as a discount ticket to some commercial caves.

Reduced rates for tours are offered to convention-goers by commercial cave owners and managers as follows: All week—Cascade Caverns, reg. \$3.00, with I.D. badge, \$1.50; Longhorn Caverns, reg. \$3.00, with I.D. badge, \$2.00; and Natural Bridge Caverns, reg. \$3.50, with I.D. badge, FREE. Cave-Without-A-Name (Century Caverns) will be open

Saturday and Sunday only, admission \$1.00.

Opening Ceremonies

Unofficial "opening ceremonies" will begin Sunday, June 18, around 4:00 p.m. at the campground. The Lone Star sound truck will provide music, and many special "Texan" events are scheduled, such as a chili cookoff, a cow-chip tossing contest, and armadillo races.

Other fun-type activities scheduled for later in the week include the speleolympics, 4-wheel drive contest, and midnite movies.

Convention Program

The final program of convention activities is presented here. It is the product of numerous discussions among the 1978 Convention Committee members and correspondence with many session and committee chairmen throughout the country. We have attempted to minimize conflicts in scheduling, particularly between the most popular programs. As a result we have a schedule with few gaps or idle periods. We believe that most cavers will have something of

1978 Convention Program

		JUNE 17	18	19	20	21	22	23															
		Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday															
Morning	9	CAVING TRIPS	CAVING TRIPS	OPEN BOARD OF GOVERNORS MEETING	BIOLOGY SESSION	GEOLOGY SESSION	EXPLORATION SESSION I	SOCIAL SCIENCES AND SECTION MEETING															
	10			CLOSED BOG. MEETING	I	I			SESSION	CAVE DIVING AND SECTION MEETING													
Lunch	11			CAVING TRIPS	CAVING TRIPS	FIELDTRIP (ALL DAY AND EVENING)	WOMEN SECTION LUNCHEON	TEXAS AND MEXICO KARST SYMPOSIUM MEETING	MEXICO PROGRAM	AMERICAN SPELEAN HISTORY ASSOCIATION LUNCHEON													
	12										CAVE BALLAD LISTENING	BIOLOGY SECTION LUNCHEON	GEOLOGY SECTION LUNCHEON	CAVE BALLAD LISTENING	REGIONS LUNCHEON								
Afternoon	1										CAVING TRIPS	CAVING TRIPS	GEOLOGY	WOMEN IN CAVING SESSION	CAVE MANAGEMENT AND SECTION MEETING	EXPLORATION SESSION II	BOARD OF GOVERNOR MEETING						
	2																	SPELEOLYMPICS	BIOLOGY SESSION II	GEOLOGY SESSION II	MEXICO PROGRAM	SAFETY AND TECHNIQUES SESSION	
Dinner	3	CAVING TRIPS	CAVING TRIPS															GEOLOGY	WOMEN IN CAVING SESSION	CAVE MANAGEMENT AND SECTION MEETING	EXPLORATION SESSION II	BOARD OF GOVERNOR MEETING	
	4																						WORKSHOPS
Evening	5			CAVING TRIPS	CAVING TRIPS	GEOLOGY	WOMEN IN CAVING SESSION	CAVE MANAGEMENT AND SECTION MEETING	EXPLORATION SESSION II	BOARD OF GOVERNOR MEETING													
	6																						HOWDY PARTY AND FEED
											CAMPGROUND FESTIVITIES BEGIN AT 4 PM												

EHK 3-29-78

interest to attend during each available time slot.

Exploration is an underlying theme of this year's convention. Most of us became interested in caves as explorers and still maintain a keen interest in this important facet of speleology. In recent years many notable discoveries have been made in North America and some are continuing as the convention approaches. Yet, exploration has been relatively neglected at national meetings and in the speleological literature of late. The all-day Exploration Session, half-day Mexico Program, and map displays will bring many discoveries to the forefront. Exploration is an integral part of the American caving scene and we hope you will enjoy sharing the excitement of discovery with us.

We have added a special symposium on Texas and Mexico karst geology on Wednesday morning, June 21. Special tours of Natural Bridge Caverns will be given Tuesday evening, June 20, emphasizing the geology and exploration of this superb cave.

Formal sessions are scheduled for Geology, Biology, Cave Management, Cave Conservation, Vertical Caving, Social Sciences, History, Cave Diving, Safety and Techniques, and Women in Caving. Workshops are scheduled for Computer Applications and Cave Packs. There are two listening periods for this year's cave ballad contest. The traditional Photo Salon and Banquet are on Thursday and Friday evenings, respectively. Publication and equipment sales will be available all week.

Pre-Convention Fieldtrips

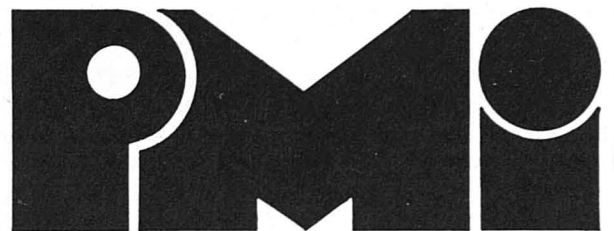
Several pre-convention fieldtrips are being planned. Unfortunately, landowner permission, access routes, rendezvous points, etc. will not be finalized in time for publication in the *NSS News*.

Persons wishing to visit wild caves during the weekend prior to the Convention (June 17-18) should send a stamped, self-addressed, legal-size envelope to Karen Kastning, P.O. Box 13165, Austin, Texas 78711.

The Convention Committee is preparing a set of fieldtrip data sheets to meet this problem. The data sheets will be sent to you. Please note that this is for *pre-convention trips* only!

Convention Fieldtrips

A few caves will be available during the entire week, while certain others may be open only one or two days. Trips to some caves will be led by local cavers on a sign-up basis. Please refer to the conventiongram and bulletin board for trip notices, status changes, etc. More permanent information will be found in the Guidebook and Program



Makes High Quality Rope

7/16" diameter, braided sheath, nylon rope, with high abrasion resistance and low stretch characteristics, designed especially for rappelling and ascending.

- 5,000 lbs. breaking strength on a bowline knot
- PMI also offers:
Rope packs, Rope washers, and Rappel devices.

Write for free catalog:

PIGEON MOUNTAIN INDUSTRIES, INC.

Dept. N

P. O. Box 803

Lafayette, Georgia 30728 • (404) 638-2181

PUBLICATIONS

of the WEST VIRGINIA SPELEOLOGICAL SOCIETY

- Bulletin 3**— Index of the Literature Pertaining to West Virginia Caves and Karst by Eberhard Werner, 1974. 155 pages. **\$3.50**
- Bulletin 4**— Caves of Monroe County, West Virginia by John C. Hempel, 1975. 171 pages, 210 caves, 70 maps (13 fold-out), 7 photos. **\$6.50**
- Bulletin 5**— Caves of North Central West Virginia by Ray and Mary Ellen Garton, 1976. 116 pages, 111 caves, 36 maps (4 fold-out), 9 photos. **\$5.00**
- Bulletin 6**— Caves and Karst Hydrology in Northern Pocahontas County by Doug and Hazel Medville, 1976. 174 pages, 300+ caves, 60 maps (2 fold-out), 3 photos. **\$6.00**
- Bulletin 7**— The Invertebrate Cave Fauna of West Virginia by John Holsinger, Roger Baroody, David Culver, 1976. 86 pages, 7 figures and plates. **\$3.00**

Set of Bulletins 3-7

\$20.00

Proceedings of the 1976 NSS Annual Convention, Morgantown, West Virginia, Edited by Eberhard Werner, 1977. 60 pages. \$2.50.

New Publications from West Virginia Speleological Survey

In cooperation with the West Virginia Geological and Economic Survey, Dr. Robert B. Erwin, Director and State Geologist, WVSS is now authorized to offer the following publications on West Virginia caves, karst, karst geology and hydrology.

Item

No.

- | | | |
|------|---|-----------------------------------|
| (1) | Caverns of West Virginia. 1958 by W.E. Davies. 402p., 57 pls., 95 figs. (Reprinted with supplement 1965). | \$10.00 |
| (2) | Supplement available separately, 1965. 72p., 13 figs. | \$3.00 |
| (3) | Hydrology of Limestone Karst in Greenbrier County, West Virginia. 1973 by William K. Jones. 55p., 26 figs. and pls., 5 tables, 2 fold-out maps. | \$4.25 |
| (4) | Proceedings of the Fourth Conference on Karst Geology and Hydrology. 1974, H.W. Rauch and E. Werner, eds. 192p., 22 papers, 10 abstracts. | \$7.00 |
| (5) | Limestones of West Virginia. 1939 by J.B. McCue, J.B. Lucke and H.P. Woodward. 560p., 37 pls., 15 figs., 1 fold-out map. Geologic and geographical distribution of West Virginia limestones. | \$6.00 |
| (6) | Structural Contour Map on the Greenbrier Limestone in West Virginia. 1968 by O.L. Haight. 35" x 38". | Folded \$3.75; (7) Rolled \$4.50. |
| (8) | Ground-Water Hydrology of the Potomac River Basin, West Virginia. 1973 by W.A. Hobba, E.A. Friel, J.L. Chisholm, Jefferson, Berkeley, Morgan, Grant, Mineral, Hampshire, Pendleton and Hardy Counties. 31" x 45". | Folded \$5.50; (9) Rolled \$6.50. |
| (10) | Limestone Outcrops and Probable Area Underlain by Rock Salt and Natural Brine in West Virginia. 8½" x 11". | full color map \$1.00 |
| (11) | The Great Cave of Dry Fork of Cheat River Virginia. 1855 (reprint 1974) by Professor George Jordan. 48p., spiral bound, a collector's classic. | \$2.50 |

All Prices are Post Paid-- Make Checks Payable To: WVSS, P. O. Box 200, Barrackville, WV, 26559 or phone (304)366-6035

which you will receive upon arrival and registration.

Mexico Fieldtrips

The AMCS is planning some fieldtrips to the Bustamante area (northern Mexico, just south of Laredo). They will have more information at the Convention. If you are planning your own trip to Mexico, they will be happy to discuss it with you during the Convention.

Important! Anyone planning on going to Mexico *must* bring proof of U.S. citizenship. This can be either a birth certificate or passport. A voter registration card will sometimes work. If you are planning to take your vehicle into Mexico, you *must* bring your title and license plate registration papers.

Geology Fieldtrip

The Geology Fieldtrip will leave the Convention campground around 7:00 a.m. Sunday, June 18. The first two stops will be to Comal and San Marcos Springs (Figure 5), the two largest springs in Texas. There will be a glass-



Fig. 1 - Cyprus Bend Park



Fig. 2 - Hotel Faust



Fig. 3 - New Braunfels Civic Center



Fig. 4 - V.F.W. Hall



Fig. 5 - Comal Springs in Landa Park

Caves of Virginia

768 pages — 1790 caves — 54 pictures — 69 cave maps — 107 topographic maps with limestone and caves indicated — Bibliography of cave literature, 1782-1960 — Special articles on conservation, geology, biology and saltpeter caves — Handsomely bound in rugged buckram.

Order from:

\$10.00 VIRGINIA CAVE SURVEY **\$10.00**
626 South Washington St.
Falls Church, Virginia

Blue Water Caving Rope

THE WORLD'S LARGEST SELLING CAVING ROPE

Proven Worldwide for Over 10 Years

MADE IN THE U.S.A. AND AVAILABLE THROUGH YOUR LOCAL DISTRIBUTOR
FOR INFORMATION WRITE TO ONE OF THE FOLLOWING ADDRESS

Blue Water Ltd. Box 6276 Ft. Lauderdale, FL 33310 U.S.A.	Lyon Ladders Wherside Manor Dent, Sedbergh, Yorks ENGLAND
Speleo Enterprises 108 Queens Pde East Newport Beach, N.W.W. 2106 AUSTRALIA	Techniques Sportives Appliquees Choranche 38080 Pont-En-Royans FRANCE

bottom boat trip on San Marcos Springs to view these artesian karst springs. The excursion will then proceed onto the Edwards Plateau to tour the Texas Hill Country, a moderately to deeply dissected karst terrain. The remainder of the morning will include Jacobs Well (a 35 m.-deep artesian spring which is a popular cave diving locality), the Devil's Backbone (scenic drive through dissected landscape), and a box-lunch at Canyon Lake Dam and Reservoir (constructed wholly within carbonate terrain). After lunch the trip will proceed down the scenic Guadalupe River Valley to Hueco Springs and then across the Balcones Fault Zone to Cave-Without-A-Name, one of Texas' longest water caves, where we will see the developed sections. At Cascade Caverns we will have a catered supper and a special geology tour of the cave and a visit to nearby Cascade Sink. The final touch will be a geologic tour of Natural Bridge Caverns, one of Texas' largest and most impressive show caves. The evening bat flight from nearby Bracken Bat Cave should be visible as we return to New Braunfels, Sunday night.

The geology fieldtrip will be by bus and will include two meals and all admission fees. Trip leaders will be Ernst Kastning and Jan Knox. Reservations (\$10.00 deposit) are necessary and total expenses should be around \$15.00 to \$20.00.

Biology Fieldtrips

There will be several biology fieldtrips during the convention week. A special tour of artesian wells of San Antonio is scheduled for Thursday morning, June 22. Arrangements are underway for trips to several local caves to observe terrestrial and aquatic fauna, and possibly special trips to observe surface biology and the Bracken Cave evening bat flight.

Because no transportation or meals will be provided, there will be *no* deposit required for any biology fieldtrip. This is a change from previous announcements and the Convention pre-registration form. Deposits already received will be refunded.

CB Channel

The NSS Convention will monitor channel seven (7).

Don't Delay

Pre-registration prices are in effect until June 1 only. After that date registration rates will increase (perhaps by as much as five dollars). Send in your pre-registration today (see March and April *NSS News* for form). Co-chairmen Ronnie Fieseler and Mike Walsh and the entire 1978 NSS Convention Committee invite you to join us "deep in the karst of Texas." ●

Longest, Deepest Caves

United States Western Hemisphere World

By Peter S. Sprouse

There is perhaps one overall conclusion that can be drawn from the following lists—there is a *lot* of caving going on in our part of the world. Flint Mammoth has passed 300 km in length and Sotano de San Agustin is approaching the 1,000 m. mark in length. Readers will notice many other changes since this list was first published in 1976 (Inside Earth No. 4). In order to keep American cavers abreast of these changes and their relative effect, I hope to continue to republish this list on a regular basis. This can only be done with the continued support of the caving community.

I am pleased to present two other compilations in addition. Hugh Blanchard has done considerable work on a list of the long caves of the world and his work appears here in conjunction with mine. This allows one to compare how the exceptionally long systems in the U.S. stack up on a world scale. Also included is a list of the deep caves of the U.S.—few of these show up on the Western Hemisphere list, being heavily outweighed by Mexico.

The use of lists of this sort as a means of comparing caves around the world has become more and more prevalent in recent years. The publication of Paul Courbon's *Atlas des Grandes Gouffres du Monde* in 1972, with emphasis on deep systems, gave the first comprehensive overview of the world's caves. The second edition of his book is expected soon with, no doubt, many more caves and maps than before. Also of major importance was the appearance of *Les Grandes Cavities Mondiales*, in the Sept., 1977, special edition of *Spelunca*, by Claude Chabert with the assistance of Paul Courbon. Unfortunately, this French publication is not very well distributed in the U.S. The special edition of *Spelunca* was used as a vehicle for presenting the report of the Commission on Major Caves (of which Chabert is chairman) on the occasion of the Seventh International Congress of Speleology in Sheffield, England. It details the long and deep caves of the world on a country-by-country basis. It attempts to document all caves over 3,000 m. long and 300 m. deep—a large task indeed.

So it is with these precedents, among others, that I present this list. The documentation of the world's caves I will gladly leave to our French colleagues, and with due emulation contribute some knowledge to the western chapter. My most sincere thanks go to the many hard-working cavers through whose willing contributions this work was made possible. The quality and accuracy of any such listing stems largely from *you*, the caver, and with you lies the responsibility to point out inaccuracies and new developments. Please direct all correspondence to: Peter Sprouse, P.O. Box 8424 U.T. Station, Austin, TX 78712.

Particular care has been taken this time to ensure that the proper and complete cave name was used. Suggestions with respect to this will be especially appreciated. Location is given only by state and country, so as not to jeopardize the integrity of any sensitive caves. Readers will notice that only meters are used on the list, and there are several reasons for this. By not using two units of measure, the list itself is less cluttered

and easier to use. Converting to all metric is in stride with a general conversion going on in U.S. caving (which this list may help encourage). Additionally, this makes this list compatible with foreign lists of similar kind. Some may be unfamiliar with the use of meters rather than kilometers in expressing long cave lengths. But by taking the figure of 26,000 m., for example, changing the comma to a period allows one to read it equally as 26 kilometers. Figures for the long caves are taken at face value, and the compiler cannot attest to whether they represent traverse, horizontal, or passage length. Figures for the deep caves represent total vertical range, and no distinction is drawn here between passage going above or below the entrance. For the deep pits, the figure for the *longest* drop possible in each pit is used, when known. Dates given with the long caves indicate when the length shown was applicable for. For the deep caves and pits, the date shows when the cave was surveyed or the most recent survey, when known. These lists are accurate, to the best of my knowledge, as of March 1, 1978.

Approximate Conversion Table - Meters/Miles/Feet
(added as a convenience by the Editor for non-metric cavers!)

Meters	Feet	Meters	Feet	Meters	Miles	Meters	Miles
1	3.28	400	1,312.4	10,000	6.21	45,000	27.96
100	328.1	450	1,476.4	15,000	9.32	50,000	31.07
125	411.6	500	1,640.5	20,000	12.43	100,000	62.14
150	492.1	550	1,804.6	25,000	15.53	200,000	124.27
175	572.6	600	1,968.7	30,000	18.64	300,000	186.41
200	656.2	650	2,132.8	35,000	21.75	306,949	190.729
250	820.3	700	2,296.9	40,000	24.85		
300	984.3	750	2,461.0				
350	1,148.3	800	2,625.1				
		850	2,789.2				

Deep Caves Of The United States

Compiled by Peter S. Sprouse
(1 Feb 1978)

	Meters		Meters
Bigfoot Cave, CA	367	Overholts Blowing Cave, WV	180
Neffs Canyon Cave, UT	357	Bloodstone-Scott's Barn Cave, AL	171
Ellison's Cave, GA	324	Wind Cave, SD	171
Silvertip Cave System, MT	321	Kelly Ridge Cave, TN	170
Carlsbad Caverns, NM	313	Hell Below Cave, NM	168
Big Brush Creek Cave, UT	262	Paiute Cave (Black Abyss), AZ	165
Papoose Cave, ID	251	Engle Double Cave, AL	158
Meanderbelt, MT	246	Small Cave, AL	156
Sunray Cave, MT	244	Rendezvous Peak Cave, WY	156
Bull Cave, TN	226	The Gouffre, TN	155
Lost Creek Siphon, MT	222	Fern Cave System, AL	155
Virgin Cave, NM	220	Little Brush Creek Cave, UT	155
Ape Cave, WA	215	Wilks Hollow Horror Hole, TN	154
South Grotto, ID	210	Sipapu Cavern, AZ	154
Spanish Cave, CO	204	Newton Cave, WA	152
Butler Cave-Sinking Creek System, VA	200	Stoned Well, AL	152
Jewett I Cave, TN	187	Fowler Pit No. 2, AL	151
Jewett II Cave, TN	182	Ram's Horn Cave, MT	151
		Summer's Double Pot, AL	151

Major Caves Of The Western Hemisphere

LONG SYSTEMS

	Meters				
Flint Mammoth Cave System Kentucky, USA	306,949 11/77	Ellison's Cave System Georgia, USA	18,878 1/77	Cueva de la Pena San Luis Potosi, Mex.	448 11/77
Jewel Cave South Dakota, USA	96,600 1/78	Grady's Cave Kentucky, USA	18,504 2/78	Sima de Milpo Dept. de Tarma, Peru	407 72
Organ Cave System West Virginia, USA	51,500 12/77	Carroll Cave Missouri, USA	18,101 2/78	Yorkshire Pot British Columbia, Canada	384 73
Wind Cave South Dakota, USA	49,150 10/78	Crump's Spring Cave Kentucky, USA	17,023 2/78	Sotano de la Joya de Salas Tamaulipas, Mexico	376 11/71
Cumberland Caverns Tennessee, USA	43,768 1/78	Powell's Cave Texas, USA	16,900 1/78	Bigfoot Cave California, USA	367 12/77
Crevice Cave Missouri, USA	41,399 1/78	Sullivan Cave Indiana, USA	15,490 1/78	Neffs Canyon Cave Utah, USA	357
Sloan's Valley Cave Kentucky, USA	36,594 1/78	Big Bone Cave Tennessee, USA	15,480 1/78	Cueva de El Chorreadero Chiapas, Mexico	345 72
Friars Hole System West Virginia, USA	35,076 2/78	Maxwelton Sink West Virginia, USA	15,200 10/76	Ellison's Cave System Georgia, USA	324 1/76
Carlsbad Caverns New Mexico, USA	33,194 12/75	Bighorn-Horsethief System Montana/Wyoming, USA	14,920 12/75	Silvertip Cave System Montana, USA	321 10/76
Binkley's Cave System Indiana, USA	32,630 1/78	Mystery Cave Minnesota, USA	14,500 7/74	Sotanito de Ahuacatlan Queretaro, Mexico	320 3/71
Blue Spring Cave Indiana, USA	31,315 1/78	Big Bat Cave Kentucky, USA	13,676 2/78	Hoya de Zimapan San Luis Potosi, Mex.	320 71
Butler Cave-Sinking Creek System Virginia, USA	27,350 1/78	Cuyler Cave Tennessee, USA	13,132 1/78	Sima Grande de Sarisarinama Bolivar, Venezuela	314 2/76
The Hole West Virginia, USA	26,940 5/76			Cueva de Santa Cruz Oaxaca, Mexico	314 70
Mystery Cave Missouri, USA	26,550 1/78			Carlsbad Caverns New Mexico, USA	313 75
Sistema Cavernario de los Perdidos Pinar del Rio, Cuba	26,000 8/77			Castleguard Cave Alberta, Canada	310 73
Culverson Creek Cave West Virginia, USA	25,740 10/76			Sotano de Javelin Queretaro, Mexico	308 11/75
Hidden River Complex Kentucky, USA	25,348 1/78			Halton de Guarataro Estado Falcon, Venezuela	305 73
Fern Cave Alabama, USA	25,149 1/78			Sotano de los Monos San Luis Potosi, Mex.	291 72
Gran Caverna de Santo Tomas Pinar del Rio, Cuba	25,000 9/77			Cueva de Coyamilpa Puebla, Mexico	289 1/78
Berome Moore-Tom Moore System Missouri, USA	24,100 1/78			Gargantua British Columbia, Canada	286 7/70
Rimstone River Cave Missouri, USA	23,800 1/78			Cueva del Rancho de Agua Amarga San Luis Potosi, Mex.	283 68
Sistema Cavernario Majaguas Cantera Pinar del Rio, Cuba	23,500 8/77			Hoyo del Aire Santander, Colombia	270 8/77
Cave Creek Cave System Kentucky, USA	22,780 1/78			Nakimu Caves British Columbia, Canada	270 2/67
Bone Norman Cave System West Virginia, USA	22,590 2/77			Big Brush Creek Cave Utah, USA	262 8/76
McClung's Cave West Virginia, USA	22,360 5/76			Sumidero de Chicasapan Puebla, Mexico	261 11/77
Windy Mouth Cave West Virginia, USA	22,153 2/78				
Gruta do Sao Mateus Goias, Brasil	20,540 1/78				
Anvil Cave Alabama, USA	20,380 1/78				

DEEP SYSTEMS

	Meters				
Sotano de San Agustin Oaxaca, Mexico	859 4/77				
Sotano de Agua Lecarrizo Oaxaca, Mexico	778 1/78				
La Grieta Oaxaca, Mexico	760 1/78				
Cueva de Diamante Tamaulipas, Mexico	621 1/78				
Sotano del Rio Iglesia Oaxaca, Mexico	535 12/67				
Arctomys Cave British Columbia, Canada	533 9/77				
Sotano de Nogal Queretaro, Mexico	529 5/76				
Sotano de las Golondrinas San Luis Potosi, Mex.	512 12/69				
Hoya de las Conchas Queretaro, Mexico	508 3/76				
Sotano del Buque Queretaro, Mexico	502 6/72				
Hoya de las Guaguas San Luis Potosi, Mex.	464 7/77				
Cueva de San Agustin Oaxaca, Mexico	458 11/70				
El Sotano del Barro Queretaro, Mexico	455 1/72				
Sotano Itamo Veracruz, Mexico	454 72				
Sotano de Tlamaya San Luis Potosi, Mex.	454 66				

DEEP PITS

	Meters
Sotano del Barro Queretaro, Mexico	410 1/72
Sotano de las Golondrinas San Luis Potosi, Mex.	376 6/67
Sotanito de Ahuacatlan Queretaro, Mexico	289 3/71
Sima Grande de Sarisarinama Bolivar, Venezuela	280 11/76
Sotano de Coatimundi San Luis Potosi, Mex.	219 73
Sotano de Sandero Tamaulipas, Mexico	217 12/74
Ojo Grande del Mal Pais Huehuetenango, Guatemala	210 76
Hoya de las Guaguas San Luis Potosi, Mex.	202 7/77
Sotano de Soyate San Luis Potosi, Mex.	197 69
Sotano de los Lobos San Luis Potosi, Mex.	189 68
Hoya de la Luz San Luis Potosi, Mex.	189 6/76

Life and Death Underground by James Lovelock. 157 pp, 16 pls, as new in dust wrapper. London 1963. The author describes his caving experiences in England, Ireland and the Gouffre Berger. But his accounts of cave accidents from Floyd Collins to Neil Moss and the Alderley Edge make thoughtful, if not sobering, reading. \$9.00 post free.

Des Merveilles Sous La Terre by Michel Siffre. 156 pp, numerous illus, many in colour. A fine coffee table book from France. Covers all aspects of caving with some fine historical photography as well as some very spectacular modern colour plates. Paris 1977. \$20.00 post free.

From: **T. Oldham (NSS No. 11477L)**
Rhychydwr
Crymmych
Dyfed SA41 3RB
U.K.

El Cimarron	183
Huehuetenango, Guatemala	70
Fantastic Pit	181
Georgia, USA	74
Sotano de la Cuesta	174
San Luis Potosi, Mex.	73
El Socavon	171
Queretaro, Mexico	74
Sotano de Otate	171
Tamaulipas, Mexico	74
Ojo Chiquito del Mal Pais	170
Huehuetenango, Guatemala	76
Sotano de Arbol	168
San Luis Potosi, Mex.	74
Flip Pit, Sotano de Agua Lecarrizo	164
Oaxaca, Mexico	1/78
Sotano de Conrado	155
Queretaro, Mexico	72
Ventana Jabali	153
San Luis Potosi, Mex.	64
Sotano de Coatituesday	147
San Luis Potosi, Mex.	74
Furnia de Pipe	145
Jiguani, Cuba	66
Sotano de Milpa	144
Veracruz, Mexico	72
Sotano de Paila	143
Queretaro, Mexico	72
Sotano de los Monos	141
San Luis Potosi, Mex.	
Christmas Shaft, Sotano del Rio Iglesia	141
Oaxaca, Mexico	12/67
Sotano de los Guacamayos	140
Tamaulipas, Mexico	69
Sotano de Gadsden	135
San Luis Potosi, Mex.	6/72
Incredible Pit, Ellison's Cave	134
Georgia, USA	
Surprise Pit	133
Alabama, USA	
Illusive Pit	133
Coahuila, Mexico	73
Sotano de Callejon	133
Queretaro, Mexico	72
Sotano del Arbol Sangre, 2nd drop	132
San Luis Potosi, Mex.	12/74
Sotano de la Huasteca	131
San Luis Potosi, Mex.	
Sotano de la Culebra	128
San Luis Potosi, Mex.	
Sotano de Aguila	128
San Luis Potosi, Mex.	
Sotano de Cepilla	126
San Luis Potosi, Mex.	
Ch'ensibilmut	126
Chiapas, Mexico	
Sotano de la Selva	122
Queretaro, Mexico	71

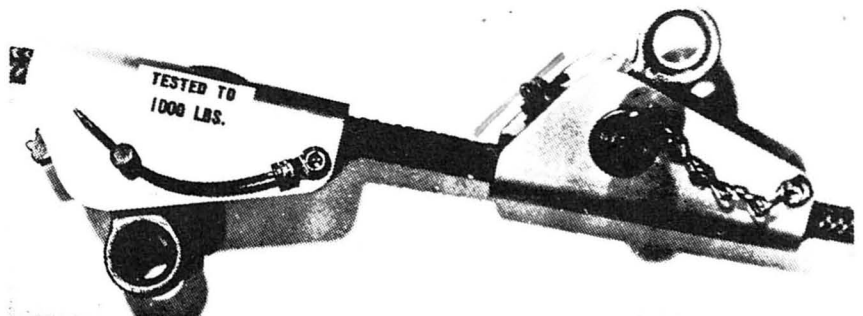
Long Caves Of The World

By H. Blanchard and P. Sprouse
(13 Feb 1978)

	Meters		
Flint Mammoth Cave System (USA)	306,949	Dachstein mammothohle (Austria)	27,746
Holloch (Switzerland)	129,525	Ogof Agen Allwedd (Great Britain)	27,500
Optimisticskaja (USSR)	110,840	The Hole (USA)	26,940
Ozernaja (USSR)	102,570	Mystery Cave (USA)	26,550
Jewel Cave (USA)	96,600	Sistema Cavernario de los Perdidos (Cuba)	26,000
Sistema Ojo Guarena (Spain)	60,000	Culverson Creek Cave (USA)	25,740
Organ Cave System (USA)	51,500	Hidden River Complex (USA)	25,348
Wind Cave (USA)	49,150	Reseau du Verneau (France)	25,220
Cumberland Caverns (USA)	43,768	Fern Cave (USA)	25,149
Eisriesenwelt (Austria)	42,000	Domica Jaskyna-Baradla Barland (Czechoslovakia-Hungary)	25,000
Crevice Cave (USA)	41,399	Gran Caverna de Santo Tomas (Cuba)	25,000
Ogof Ffynnon Ddu (Great Britain)	38,500	Berome Moore-Tom Moore System (USA)	24,100
Sloan's Valley Cave System (USA)	36,594	Rimstone River Cave (USA)	23,800
Reseau de la Dent de Crolles (France)	35,600	Sistema Cavernario Majaguas Cantera (Cuba)	23,500
Friars Hole System (USA)	35,076	Cave Creek Cave System (USA)	22,780
Easegill Caverns (Great Britain)	35,000	McClung's Cave (USA)	22,360
Carlsbad Caverns (USA)	33,194	Platteneckeishohle-Bergerhohle (Austria)	21,000
Reseau Felix-Trombe (France)	32,822	Pestera Vintului (Rumania)	20,785
Binkley's Cave System (USA)	32,630	Gruta do Sao Mateus (Brasil)	20,540
Reseau de la Pierre Saint-Martin (France)	32,580	Selminum Tem (Papua-New Guinea)	20,500
Blue Spring Cave (USA)	31,315	Anvil Cave (USA)	20,380
Tantalhohle (Austria)	30,600		
Butler Cave-Sinking Creek System (USA)	27,350		

GIBBS ASCENDERS

Each Ascender is tested to 1000 pounds. Its smooth rounded teeth produce little or no rope damage. Especially applicable to equipment haulage, group ascents, fixed rope and rescue operations. Operates on icy or muddy ropes.



ASCENDERS with Spring Wire & Quick Release Pins
ROPE • SLING • CARABINERS

GIBBS PRODUCTS
854 PADLEY STREET
SALT LAKE CITY, UTAH 84108

**20% DISCOUNT
ON ASCENDERS
WITH ORDERS OF
\$50.00 OR MORE**

INSIDE EARTH

All back issues
fast going out-of-print

No. 1 — Original	\$75.00
No. 1 — Xerox	6.00
No. 2	2.50
No. 3	2.50
No. 4	2.50

Order now from Inside Earth
P. O. Box 8500
Austin, Texas 78712

Now the deepest in the entire country!

California's BIGFOOT CAVE

By Steve Knutson
Copyright, 1978 by KMCTF

"The thing was of gigantic size—about seven feet high—with a bulldog-like head, short ears and long hair... A number of people have seen it and all agree in their description except some make it taller than others... It... makes winter quarters in some caves in Marble Mountain."

—Del Norte Record
January 2, 1886

Introduction

The following is an account of great good fortune. Explorations over the summer seasons of the past four years, 1974 through 1977, of caves in the Marble Mountains of Northern California has shown this area to be one of the two most speleologically significant alpine karsts in the United States. During that time Bigfoot Cave has been explored and mapped to a depth of 1,250 feet, making it the deepest cave in this country. Its length of 26,470 feet also makes it one of the longest alpine karst caves in the U.S.

The Marble Mountains occupy but a small portion of the Klamath Mountains Physiographic Province, an area of complex geology, roughly elliptical in shape with its long axis oriented N-S, and extending north to Roseburg in Oregon and south to the latitude of Red Bluff, Calif. Caves are found in glacially-formed cirque valleys at elevations of 5 to 7,000 feet. Except in very dry years the snow pack is heavy—around 15 feet in depth—and the caving season generally extends from mid-July to the start of winter bad weather, usually in October. Summer and fall weather can be unpredictable—storms come in from the Pacific Ocean, only 40 miles to the west, with surprising frequency. Snow may fall in mid-summer. The caves are typically wet and cold with temperatures of 37 degrees made even colder by wind-chill from normally-encountered air movement. Wet suits are necessary when working in most caves.

Pre-KMCTF Exploration

The area was discovered by cavers in Sept., 1962, by members of Cave Research Associates out of Berkeley, Calif. Subsequent trips were made in 1963 and 1964. Bigfoot was entered via the 70-70-15-20 foot pit series that we later called the Upper Entrance. Exploration extended to the Terminal Room (our name) and included one major side pass-

age. No mapping was done. Their names, Contact River, River of Towers, and Serpent River, have been used in our present mapping in honor of these original explorations. The cavers then used cable or rope ladders, down parkas, and heavy wool socks for mittens. They named the cave Nevermore Abyss, reflecting their feelings toward the harsh conditions. Concerning cave locations the CRA was dedicated to total secrecy and the existence of caves was not revealed, even to the Forest Service. KMCTF explorations, therefore, are in no way based on prior knowledge and are, in essence, completely original.

1973

In 1973 the Klamath Mountains were largely an unknown speleological quantity. Grottos existed to the north in Portland, Ore., in Sacramento and further south in California, and to the east in Reno, Nev. All seemed occupied elsewhere. Mike and Lynne Sims and I saw this as an opportunity not just to find new caves, but to guide the Forest Service in management and conservation if such seemed appropriate. With a cave in the Salmon-Trinity Primitive Area as our first stimulus, we formed the Klamath Mountains Conservation Task Force of the NSS. With a pile of leads we set out to track down the caves.

1974

In the summer of 1974 I was situated in Cave Junction, Ore., and spent weekends scouting the various limestones of the Klamaths. The Marble Mountains were mentioned in a cave survey as having small caves undergoing collapse—this was obviously secondhand. The limestone there is described in a geologic report as being thinbedded and coarse. It didn't feel promising. On the weekend of July 13-14, though, the lower areas were suffering a heatwave so I headed for the Marbles for a Sunday recon. At the wilderness trail parking lot a fantastic coincidence produced Wayne Walent, a caver from Monterey, Calif. (formerly from Ohio). We observed extensive, well-developed karst and were even rewarded with a small but nicely formed cave. It looked *very* promising. From then to the end of the season a few caving friends whom I thought could handle the area received a series of postcards reporting events, some of which they probably didn't believe. On

Aug. 3, I went in with Jim Nieland and it didn't take us long to find the first major cave of the area which included 500 feet of trunk stream passage—rare in the far west. We named it Streamway. Aug. 25 saw Jim, his wife, Libby, Wayne and I doing some scouting.

We theorized (on entirely false grounds) where the largest cave should be. At our projected location we found a double pit (70' and 65') entrance to the cave we now call Bigfoot. On Aug. 31, Jim, Libby and I mapped down through long stream passages, a huge room, and an extended stream crawl to a large chamber where the cave stream exited via an impassable opening. There appeared to be no ready way on so we called it the Terminal Room, 530 feet below our Discovery Entrance. Upstream leads were still available. On Oct. 16, Jim and I mapped the main upstream passage about 2,000 feet to the base of a very high dome 160 feet above the Discovery Entrance, giving the cave a total depth of 690 feet.

In September I had turned up a deep multiple pit and a somewhat higher horizontal entrance sucking air, at what now seemed the correct location to drop into the uppermost part of Bigfoot. On Oct. 5, Mike Sims, Greger Erickson and I had pushed into the sucking entrance. Gradually descending, we had followed a tortuous passage, alternating between bellycrawl and narrow slot. At one point it was so



Upper entrance to Bigfoot system.

narrow that we abandoned our vertical gear and rope and nearly abandoned the cave. But a way was found and a bit further along it enlarged and still further it joined a much bigger canyon leading steeply down to a deep pit. We felt sure this would drop into upper Bigfoot.

Jim Nieland and I returned to the new "upper entrance" on Oct. 13 to drop the pit and make the connection. We found the pit to be 95 feet, a beautiful drop. It led directly to another pit of 15 feet...than a 10...and a 30. Just downslope from the bottom of the 30 we came to a window where the passage dropped into another deep pit. We were 500 feet below where we had entered, out of rope, and not going to Bigfoot. We named this sporting little cave "Meatgrinder," for the devilish portion near the entrance. It was obvious, however, that it would be more fun if we could find a way around the bad stuff. As luck would have it, we found exactly that, a new entrance closer to the pit series and involving an additional 70 foot, 3-step pit. On the 27th of October, Jim, Libby and I pushed on down Meatgrinder. The next pit was a 70. At the bottom a narrow slot led to a 30-foot drop to an active stream passage. About 150 feet along this we encountered yet another drop, a wet 20 footer. This seemed to be the last of the pits but the cave did not want to open up. Pushing on, we passed through several hundred feet of narrow canyon to an elongated, 20-foot-high room. At the far end of this the stream continued on—a 1-foot-high water crawl. Fortunately, this yielded almost immediately to a very high dome and then a little walking stream passage. This soon dove into some complex constrictions. The cave definitely continued, with good air flow, but it was time to give in. Our depth at that point was -719 feet...and the cave wasn't acting like Bigfoot at all.

So, back to the pit near Meatgrinder. Drops of 70, 70, 15 and 20 feet separated by steep, loose rock slopes took Mike Sims, Bill Devereaux and me directly to the previous high point of Bigfoot. We ended the year with the depth of Bigfoot at 910 feet and an apparently separate cave, Meatgrinder, still going at -719 feet. A fantastic season.

1975

In 1975 we tried to get into Bigfoot as early as possible. Early summer scouting showed a heavy snow pack but that the Upper Entrance had melted open. In the depths water could be heard, churning. In early July, with five feet of snow pack remaining, we went into Bigfoot for a look. The trip was a small disaster because crawls, like the Lurking Fear, were flooded with fast-flowing ice water. Two weeks later the season

started for real and Luther Perry, Howard Hunt, Mike Sims, Greger Erickson and I entered Bigfoot and descended to the Terminal Room. About 25 feet up on one wall is a lead which lacks a floor water-channel which would have indicated it acted as a tributary to the Terminal Room. This gave us the caver-hope that it was instead the opposite, an overflow bypass which might lead past the downstream end of the Terminal Room. The wall at the lead is sheer and muddy. After a long, cold time of various people working at placing bolts, I got to do the last bit and entered the lead. It was sucking air and went on. Through some canyon passage it entered a large breakdown chamber with a noise of running water. At the bottom of a long talus slope was the main cave stream flowing on in a fine canyon passage.

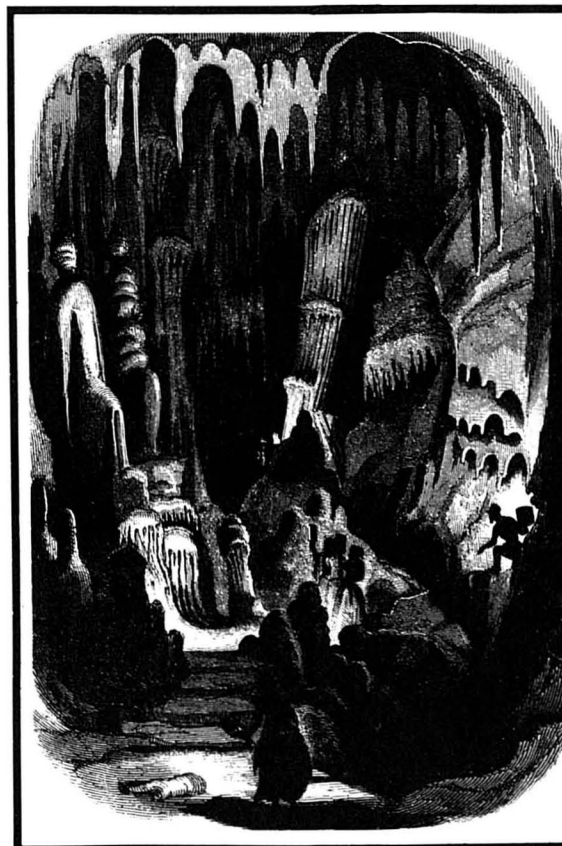
On July 26, Steve Johnson and I mapped the by-pass and pushed on. The canyon produced four waterfalls, two requiring a rope and one being very sporting with the rope having to be rigged right in the water. Johnson rappelled the latter on 3/8" goldline (new) which severed at the sharp edge at the top. Steve essentially fell down the drop—which fortunately was only 20 feet. It was overhanging and not free-climbable, however, and if I had already gone down it would have been disastrous—there were no other cavers around. Steve was OK—in fact, after falling down the drop he got his camera

out and took a picture of me coming down. Past the fourth falls the main passage went into low crawls, through a 6" air space, some more crawl to a sump. We were disappointed and we were justified. The survey later showed the sump to be at a depth of 1,070 feet. It seemed reasonable to name this the Insufficient Extension.

We turned to Meatgrinder to see what it might do. On two push trips, however, the passage stayed small and the wind-chilled conditions allowed only about 300 feet to be mapped each



Rappel down the '90' in Meatgrinder.



Coming Soon

1978-1979 Speleobooks' Cavers Calendar

Contains reproductions of rare 19th Century cave engravings (not used previously) and significant historical caving dates from around the world. The calendar has been used as a reference source by speleohistorians as well as an all-purpose wall calendar keeping cavers aware of past and current events.

Order Your Copy in Advance!

\$2.50 plus .50 postage

SPELEOBOOKS
P.O. Box 12334
Albuquerque, N.M. 87195

trip. Luther Perry, Dick LaForge, Donna Mroczkowski and I went in on Aug. 26. Mainly crawlways were surveyed and the crew wondered if this cave would ever open up like Bigfoot. On Sept. 27, Luther Perry, Wayne Walent and I mapped on. At one place a body barely fits through, but after 300 feet we were in walking passage. Cold terminated the survey so we forged on for about 500 feet, losing our walking height, air flow and finally the cave stream at an impassible place. We had to suspect the air was going into a bypass—that the total extent of the cave was not yet determined. Our total surveyed depth was 810 feet.

Winter closed in early that year but we felt we were beginning to know the area and what to expect. New caves were showing up, but the two deep ones had not enlarged greatly and we thought we had their extent more-or-less in hand.

1976

Our continued meetings with the Forest Service led to the present cooperative agreement whereby the KMCTF is assessing the number and significance of the caves. The Forest Service is concerned about both preservation of the caves and about caving safety in the harsh conditions encountered in these alpine caves. For formulation of cave management plans,

the Forest Service needed to know the number of caves involved, assessing the total extent of the major caves was of secondary importance. This had not been our orientation but we appreciated our freedom of action in the area. We decided in the coming season to finish surface scouting in the area and finish mapping the smaller caves. Push trips would be secondary. Frustration of sorts was the result. A new look at the marble yielded new caves, and the known smaller caves proved difficult to map—none had the big passage of Bigfoot—and tended not to quit, just get bigger. This occupied a lot of our time.

In early September, Dave Mischke, Ken Byrd, Dave Walker and I got things started in Bigfoot by mapping some overflows in The Lurking Fear and a tributary stream passage there that went upstream to the Chthulu Room. Greg Erickson, Berney Dunn and Wayne Walent mapped upstream in the River of Towers eventually stopping at a high dome.

Surface mapping had indicated that the farthest point reached in Meatgrinder was not more than a few hundred feet southwest of the Big Room in Bigfoot. Further, it was possible that Meatgrinder could join Bigfoot via the fault that terminates the main void of the Big Room and starts the Lurking Fear. On Sept. 27, Berney Dunn and I went into Bigfoot to have a look at that

area. We found cave unlike anything else in Bigfoot. Elsewhere it is a relatively simple dendritic array of stream passages formed on a marble-schist contact in mainly vadose fashion. Southwest of the Big Room we entered a strange complex of tubular passages that had no particular orientation. On Oct. 3, Dave Walker, Todd Rasmussen and I returned and finished mapping the near-2,000 feet of complex passage. At one point we struggled down through breakdown at the bottom of a small pit and broke into a very low stream passage. This could be followed upstream through shattered breakdown for a short distance with great difficulty, then not at all. Downstream it eventually entered the start of the Lurking Fear. Could this be the Meatgrinder stream? Nowhere in this new area, which we named The Lair of the Ice Worm, could we find the strong air flow so characteristic of Meatgrinder.

The season was all but over. Still, Dave Walker and Dick LaForge "had to see" the bottom of Bigfoot. On Oct. 4, in they went. Near the bottom they backtracked in side passages to an apparent overflow blocked with breakdown that Steve Johnson and I had seen the year before. Carefully moving some rocks, this intrepid duo popped out into borehole. They followed this for some 1,400 feet, going gradually downward and finally to a stream. Here they

BIGFOOT CAVE

PROFILE - E-W mag

SISKIYOU COUNTY, CALIFORNIA

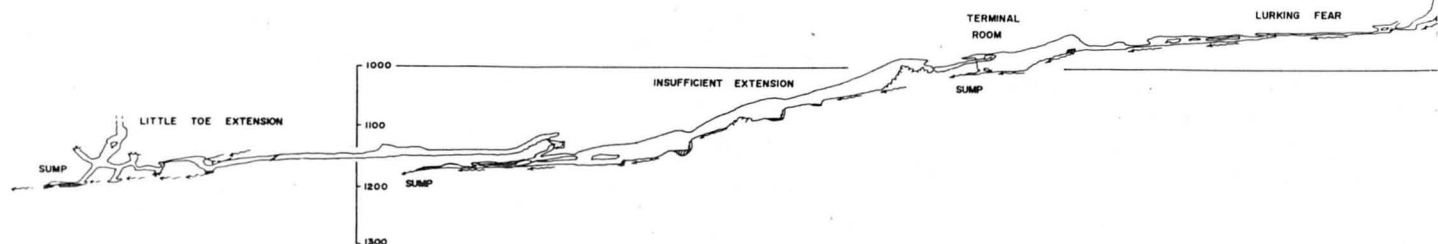
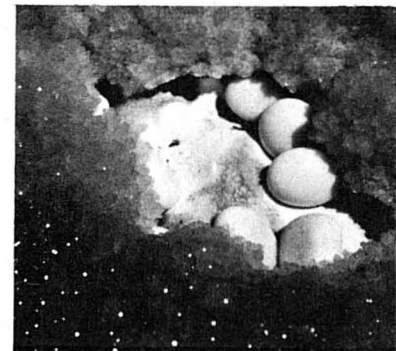
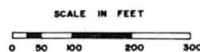
COMPASS, CLINOMETER, AND TAPE SURVEYS

COMPILED 1978 STEVE KNUTSON

DRAFTED 1978 LYNNE SIMS

COPYRIGHT 1975 STEVE KNUTSON, KMCTF

REVISED 1977 AND 1978



stopped and mapped back to known cave, declaring their new passage to be The Little Toe. The 19 hours they spent is the longest yet done in the Marbles.

The following day Todd Rasmussen and I heard of the breakthrough, cancelled our other plans, and headed into Bigfoot as Walker and LaForge left the area. At the stream in The Little Toe, we pushed on and on...50 feet anyway, to a sump. What a bummer. But it added a few feet of depth and the whole Little Toe, though mainly horizontal, deepened the cave by 34 feet, bringing it to -1,104.

1977

We were enthused by the results from "no push" 1976. The increased depth in Bigfoot meant that the addition of Meatgrinder would make the combined cave sufficiently deep to pass Neff's Canyon Cave in Utah as deepest in the United States. The Lair of the Ice Worm area made that look distinctly possible. The extensive nature of The Little Toe, all at the 1,000 foot level, gave hope of another breakthrough there. Personally, I intended to regard 1977 in opposite fashion to 1976—the push would come first.

There was a record low snow pack in 1977 and by August Marble Valley was quite dry. The first serious push was by Mike VanNote and Steve Johnson to the Little Toe in Bigfoot. The Lurking Fear

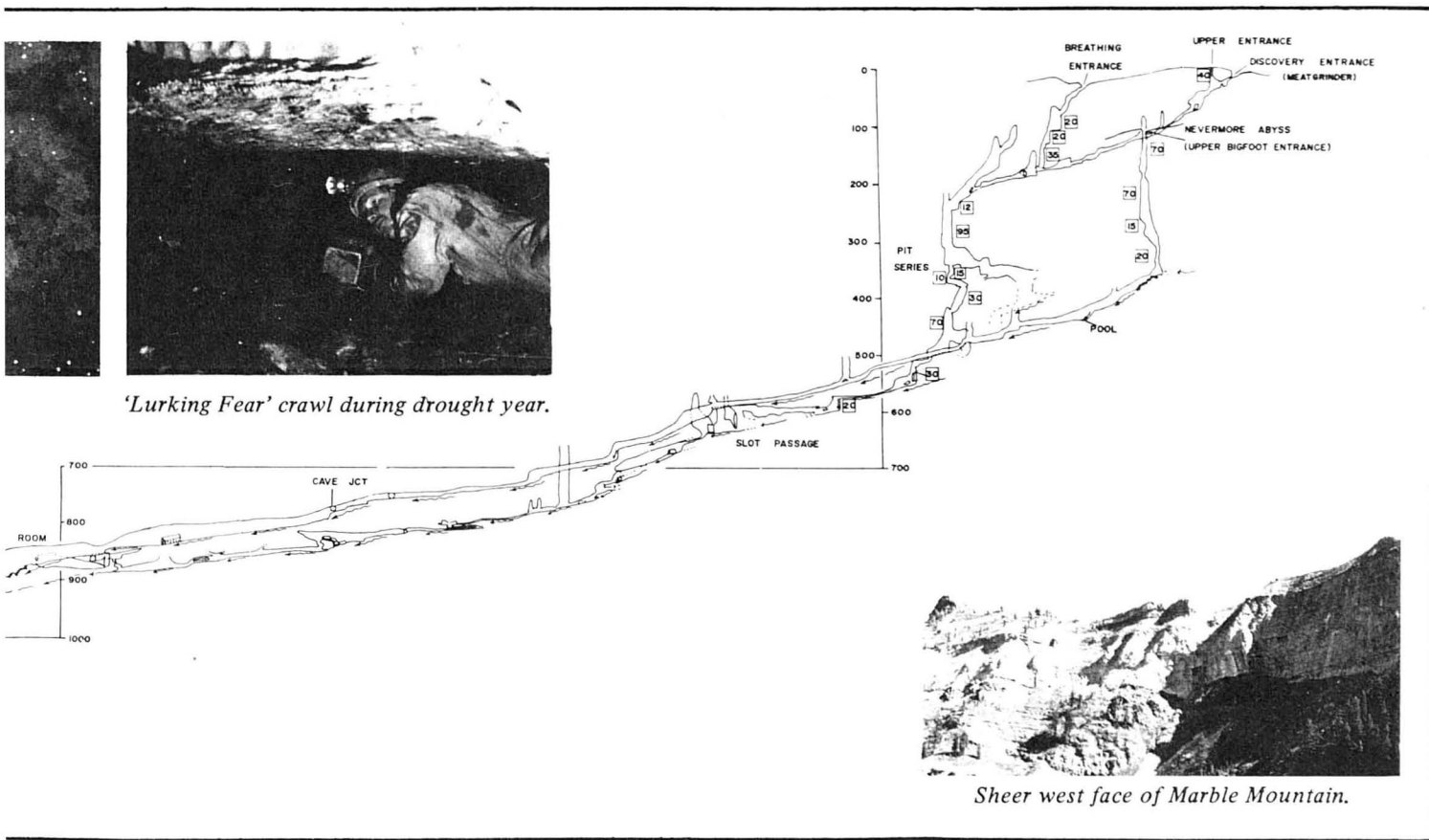
had so little water that sumps deserved checking. The one at the end of the Insufficient Extension was still full. At the end of the Little Toe they mapped upstream but found no by-pass. Working back up cave they next dropped a short pit in a side passage. This led downstream to a sump—no increase in depth. Upstream, however, the new passage widened spectacularly, up to 100 feet wide and 40 feet high. The stream leading to the new sump entered via a large trunk passage. Further along this room they encountered another stream, entering from borehole and exiting in a narrow, nasty canyon—promise for the future. Their new find finally ended by joining the Insufficient Extension above the four falls. Steve Johnson, Dick LaForge and Mark Fritzke returned later and mapped the new passage between the Little Toe and where it rejoins the Insufficient Extension.

The September speleocamp came and a few hardcore cavers gathered. In view of the results from the earlier pushes in the Little Toe, we decided to push Meatgrinder and hope for a connection. A direct connection didn't really seem so likely. We had already searched for it in the Lair of the Ice Worm in Bigfoot and been to the end of the stream passage in Meatgrinder with no success. Still, if we mapped all the lower portion of

Meatgrinder and plotted the caves together we should certainly be able to open a connection but it probably wouldn't happen this year.

On Sept. 5, Dick LaForge, Mark Fritzke, Greg Erickson and I warmed up with a trip to the bottom of the 95-foot pit in Meatgrinder. There we pushed an unexplored canyon heading in the general direction of Bigfoot. This led to a climbable 20-foot drop and on to a deeper pit. The pit dropped into a stream passage which led steeply down to another pit. The stream, unfortunately, was heading back toward Meatgrinder so we gave it up for then. The next day a doctor at the speleocamp took the stitches out of a week-old gash in my head, said my helmet was causing infection and told me to sit out a couple of days!

Dick LaForge, Mark Fritzke, Wayne Walent and Jon Burkig went in on Sept. 7. Four hours into the cave they came to the end of the previous surveys. The plan was to map the previously explored stream passage to the end, then look for passage going north and east toward the Lair of the Ice Worm. After mapping about 200 feet, a higher level was spotted and the survey disintegrated in the excitement of a possible connection. A complex of twisting, occasionally constricted, passages was entered but the sense of direction is often not too



good in caves and a lot of enthusiasm was expended in exploration to the south. Wayne got into one passage that went an estimated 800 feet. Finally, the crew reassembled and mapped its way back to the stream passage to the end of their earlier survey. After four hours of hard work, they exited the cave.

The news of this trip was exciting—there was more cave at the bottom of Meatgrinder. Something should lead to Bigfoot...sometime...

By Sept. 9 most of the cavers had left the area; in fact, only Dave Cowan, Jon Burki and I were left. Jon had done a hard surface recon the day before but Dave was ready and so was my head, so he and I went into Meatgrinder. Down the entrance pit and through some canyons and crawls we quickly came to the pit series. Fully rigged, this was a real pleasure. Six rappels, down closely situated drops of 95, 15, 10, 30, 70, 30 and 20 feet brings one back to reality. This is Meatgrinder and the rest isn't fun. At the end of the

previous survey we paused and got out the mapping gear. Ignoring the side leads, we mapped along the stream to the end. There were a couple of places where the air could be felt going up into tall, narrow slots. The end looked as I remembered it, with the stream proceeding in a passage only a few inches high. A dig did not seem possible. Starting back upstream we looked at the first of the places with air movement. There was a side chamber in broken rock with air flowing into the ceiling. We observed this very closely—it definitely looked shattered and dangerous to fool with.

We were about to move on when I noticed, at a certain angle through the ceiling cracks, what seemed to be black space. Half afraid that it was nothing and half afraid that the ceiling would collapse, I moved a couple rocks and chimneyed up into the breakdown. Pushing a few feet horizontally and scrunching my body together I was able to move up into a crack and poke my

head into the void I had seen. A room. Still in the crack, I looked around. To one side, on a mud-covered ledge, was a most ridiculous but unmistakable landmark—a three-foot-tall spear of rock which had fallen from the ceiling in ages past and stuck in the mud on the ledge. This was the Lair of the Ice Worm in Bigfoot.

This breakthrough increases the depth of Bigfoot to 1,205 feet, giving it the U.S. depth record, at least for now. The old record stood for many years—far too long. In recent years there seems to be an awakening of interest by American cavers in deep caves, both here and abroad. I like to think that our work in the Klamath Mountains is a part of this. Certainly I know that there are some extremely competent and determined cavers working on deep caves in other parts of the country. I will be perhaps as disappointed as they if Bigfoot stands as the record for very long.

Already it seems like it all happened ages ago. ●

Region News and Notes

AMCS

Cavers from various realms of the world spent this past Christmas vacation in Mexico. A general count of about 50 cavers headed south of the border leaving the cold temperatures behind. Three Australians were helping to push some deep caves in the Huautla area. Cavers from Illinois, along with several Texans, were working on the newly discovered river caves of Zoquitlan. There were

many Austin cavers exploring and helping to push Cueva de Diamante to its terminus. Much has been accomplished in the past few months and can be read about in the AMCS Activities Letter No. 7.

La Grieta, stopped at -665 m. in May 1977 due to lack of time, has since been pushed to its -760 m. terminus in breakdown tubes. This past Christmas saw 13 active cavers in the Huautla area pushing some of the deepest systems in the Western Hemisphere. On Dec. 18, packed full to the brim, Bill Stone's "Bozo Bus" and Robert Hemperly's speleotruck departed from Austin headed for the "Deep South." The expedition, led by Bill Stone (Tex.) and Bill Steele (Tex.), with help from eight Americans and three Australian cavers, pushed the system 95 m. deeper and 4.7 km. horizontally. Spending 12 days at Camp 2 (-520 m.) helped clean up leads below Camp 1 (-300 m.). La Grieta, presently 760 m. deep and 8.8 km. long with four going leads above Camp 1, is very close to connecting into a newly-discovered Sotano. Amazingly enough, the potential for the Huautla area is proving itself.

While exploring was going on in La Grieta, three Australians, Julia James, Neil Hickson, and Al Warild, pushed a new system, Sotano de Agua Lecarrizo, located higher up on the ridge near San Andres, to a depth of nearly 300 m.

When Camp 2 broke in La Grieta, eight more cavers (Richard Schreiber, GA; Jean Jancewicz—TX; Roy Jameson, TX; Gary Stiles, AZ; Steve Zeman, TX, Steel, and Stone) joined the effort for two long pushes. The first, on Jan. 10, saw Schreiber, Hickson and Warild at -517 m. and out of rope. The second and final push of the expedition lasted 22 hours; again the rigging team ran out of rope! This point was 778 m. below the entrance.

Sotano de Agua Lecarrizo, with 31 pitches, is expected to connect to La Grieta at the 760 m. level. Horizontal extent is 1.8 km. with no camp yet expected. The passage fol-

lowed was the dry overflow, leaving the stream direction as a lead not yet checked. Many photographs were taken in both systems.

Golondrinas Record Set

On Dec. 8, 1977, there were several cavers at Sotano de las Golondrinas. Tom Baine, NSS 13808, from Maryland and an avid bike rider, set a new record for climbing out the 1,094' entrance pitch in 25.15 minutes, non-stop. There was also a trip down to the bottom (-512 m.) to sign names in the mud plug.

Cueva de la Pena, S.L.P., Mexico

Pena, bottomed at a sump -448 m. deep, has 22 pitches with the longest being 71 m. This past Thanksgiving 1977, Bill Stone (Tex.), Bill Steele (Tex.), Tracy Johnson (Tex.), Margaret Hart (Tex.), and Mark Minton (Tex.) were exploring Pena, inhabited by vampire bats, when at 300m deep they ran into bad air. The last five pitches were miserable. From the "71 Special," a big, booming side passage 30 m. x 28 m., continues for 300 m. The crew spent two 21-hour trips to rig, survey the system, and derig back to the surface. Cueva de la Pena is 1.2 km. long.

The AMCS is pleased to announce that Bulletin No. 6 is now available. *Studies on the Caves and Cave Fauna of the Yucatan Peninsula* "includes the first results of an intensive study of the cavernicole and related endogean fauna of the Yucatan Peninsula." The Bulletin has two sections: the first 214 pages are biology and the remaining 80 pages include cave descriptions of the peninsula. Write AMCS, P.O. Box 7037, Univ. Station, Austin, TX 78712, for prices. The AMCS is also accepting expedition reports on caving in Mexico; write Jeff Horowitz, AMCS, 1307½ Kirkwood, Austin, TX 78722.

DISCOVERY AT THE RIO CAMUY

the story of the discovery and exploration of a subterranean river in Puerto Rico

is out of print, but the last remaining copies are available by sending \$6.95 to the authors:

Russell and Jeanne Gurnee
231 Irving Avenue
Closter, New Jersey 07624

Your book will be sent postage prepaid by return mail.

CAVES OF THE SAN JUAN PLATEAU

By
Bill Stone and Roy Jameson
Association for Mexican Cave Studies
Bulletin 7

Read about the exploration of three of the western hemisphere's deepest caves; Sotano de Nogal (-529 m.), Hoya de las Conchas (-508 m.), Sotano de Javalin (-308 m.) and many more. Cave descriptions, geology and biology. 70 pp., \$5 postpaid from A.M.C.S., Box 7672, Austin, TX 78712.

Zoquitlan, Puebla

The river caves of Zoquitlan, Puebla, were visited by AMCS cavers. Sotano del Coztcomilpa was explored down to a siphon at -164 m. Cueva de Coyamilpa was explored down through increasingly wet drops to -289 m. and still goes.

ARA

The winter "paper" meeting of the ARA was held at Yavapai College, Prescott, Ariz., on Feb. 25. Presentations were given on "secondary cave gypsum deposits" by Rick Day and "exploration of Sumidero de Yochib" by Mike VanNote. New officers for 1978 are: President, Allen Harris; VP, Nancy Myer; and Secretary-Treasurer, Arlin Pound.

Other regional news of note includes a second gating of Chiricahua Crystal Cave. A secondary gate was installed by the Escabrosa Grotto deep in the cave within one week after the necessary Forest Service paperwork was completed. The cave now has two functional gates. Keys for both may be obtained from Forest Service headquarters in Portal, Ariz. (near the cave) as well as in Douglas and Tucson.

Onyx Cave, sold last summer, has been released by Escabrosa Grotto. An explorer troop from the Phoenix Area, whose leaders wrecked the gate with a hydraulic jack last Oct. 29, gave the grotto a check for \$75 to cover repairs. Restoration work continues in the cave.

Rick Day

CENTRAL AREA

This month the Kentucky Speleofest returns to the successful Camp Carlson (between Ft. Knox and Irvington on U.S. 60) location used two years ago. In 1976, this site was popular due to the cabin facilities and hot showers that stayed hot. This year, the Louisville Grotto is planning to add several new caves to the guidebook of the area, which is the grotto's primary surveying task each year (together with the continuing work in Big Bat Cave). The Speleolympics and Bluegrass Band have become permanent fixtures at these meetings. Last year about 500 cavers attended Speleofest, and the Louisville Grotto hopes to extend a similar dose of Kentucky hospitality to the cavers that come this year for the long Memorial Day weekend from 5 p.m. Friday the 26th to Monday the 29th. Cabin accommodations are limited, and pre-registrations should be mailed by May 12 to 2122 Millside Drive, Louisville, KY 40223. For further information call 502-367-6292.

MAR

The annual MAR business meeting was held at Jay Herbein's house in Harrisburg, Penn. on Saturday, Feb. 25. Among the items of business were the proposed Gandy Lakes development near the Sinks of Gandy, suggestions for reimbursement of private expenses incurred during cave rescues, the Maryland Cave Protection Act, and the up-dating of mailing lists.

It was decided that the vice-chairperson will become the person in charge of notifying the *NSS News* of MAR functions. This year's vice-chairperson is Randy Hurst and any news of MAR activities should be sent to him at 2899 Dell Lane, Lancaster, PA 17603.

The Spring MAR will be held in Roaring Springs, Penn., the weekend of April 22. Those wishing to be included on the MAR mailing list, which has become badly out of date, should send a 3" x 5" card with each name and address to Bob Gulden, 922 Autumn Valley Lane, Gambrills, MD 21054.

MVOR

The 13th Annual Hodag Hunt, sponsored by the Wisconsin Speleological Society, will be held the weekend of Sept. 15-17, 1978. The event will be held at the Door County Fairgrounds on 14th Avenue in Sturgeon Bay, Wisc. Sturgeon Bay is located midway on the scenic 52-mile-long Door County Peninsula that juts into Lake Michigan; this is the first time ever that Hodag Hunt has been held outside of the "driftless area" of southwestern Wisconsin.

For a glaciated area Door County has a surprising number of interesting caves, including Horseshoe Bay Cave which is the longest cave in the state of Wisconsin. Preliminary plans include a guidebooklet and a Saturday night banquet with a guest speaker. Scenic and geologic field trips are also being planned; the WSS will finalize more details as the event draws closer. Hold this date open and plan now to attend. For more information contact George Zachariassen, 7340 Portland Ave., Wauwatosa, WI 53213; (414) 476-9017.

On January 14-15, nine AACS cavers surveyed in Arkansas' Arlicomi Cave. A total of 5,998.4' was booked for the weekend. Several passages, however, still continue, both upstream and downstream of the 25' entrance pit.

Several intriguing leads, most of which are crawls or upper leads, beckon with rather high air currents and AACS members hope to be permitted to return and continue exploration and mapping at the earliest opportunity.

A splendid five-color map (for different levels) has been drafted by R.C. Schroeder and Danny P. Godwin and at a scale of 1" to 40' is already 5 1/2' long. A more detailed article will be written for the *News* at a later date.

Mike Warshauer

Ennis Cave is for sale. The *Stone County (AR) Leader* carried, in early February, an advertisement offering 160 acres, plus Ennis Cave, for \$48,000. Interested persons should contact I. Lipton, 800 Chestnut, St. Louis, MO 63101. Ennis is among the most popular stomping grounds for cavers, with more than 3 1/2 miles mapped. (See *NSS News*, June '75).

Scott House

Missouri now has four counties with over 200 caves: Perry (437), Greene (237), Pulaski (234), and Shannon (231).

Onyx Cave in Pulaski County has been increased in length to 7,800 feet. John Swartz and crew began surveying Pulaski's Cox Cave. They got 1,000' before the cave was closed a week later. In all of Missouri there is no place with worse public relations than Pulaski County. Much of this can be related to the following: *Caves of Missouri* (with its 110 Pulaski locations), Ft. Leonard Wood (with its 20,000 bored servicemen), and, most of all, years of inconsiderate cavers who, entranced by mammoth entrances everywhere, rarely

PREMIER LAMP WITH
JUSTRITE 4" REFLECTOR

\$9.95

ADD 10% MAILING CHARGE

DONALD DAVIS

P.O. Box 25

Fairplay, Colorado 80440

seek a landowner or ask permission. Hopefully, recent efforts by cavers from Couteau, SEMO, MSM, and Fort Wood will have a positive effect on landowners in the area. Currently, however, several of the biggest caves (Bruce, Tunnel, Inca, Piquet, and Cox) are closed.

The Winter Board meeting of the Missouri Speleological Survey was held January 21 with 12 organizations represented. Highlights: The MSS is now listing divable springs in the printout. (Assuming that otherwise they fulfill the requirements for caves.) A historical project, including biographs, is planned for the MSS' 25th anniversary in 1981. Also in 1981: since the UIS Congress of Speleology is to be held in Kentucky, the MSS has offered to hold a speleo-camp in conjunction with it. Further correspondence with the Missouri Department of Natural Resources concerning state-owned commercial Fishers Cave is planned.

Chaminade Grotto of St. Louis has completed its map of Copper Hollow Spring Cave and have added 1,000' to the map of Little Scott Cave in Washington County. MMV has mapped numerous small caves in Washington, Jefferson, and St. Louis Counties; most of this work has been done by Joe Koenen. Jim Zollwegg has completed another 800' of the Nameless Cave project.

Scott House

SWR

The survey of Hay's Cave is nearing its apparent completion with close to a mile of passage being logged. The gypsum cave is located in the high plains of New Mexico. East 4,800' of the Hay's entrance is the pit entrance to Wayne's Womb. Surveying is now underway there, with almost 1/2-mile of walking passage completed. There is still hope of connecting the two caves but, due to what is shown by the surveys so far, the chances seem slim.

New Mexico's only local caving publication is the bi-monthly *Southwestern Caver*. Inquiries concerning subscriptions should be

NOW AVAILABLE:

The Exploration & Survey
of Ellison's Cave, Georgia
(141 Pages)

Compiled by Marion O. Smith

\$4.50 postpaid

Order from:

Marion O. Smith
5624 Magazine Rd. SW
Knoxville, TN 37920

VERTICAL CAVERS!

Subscribe to the only publication specifically for vertical cavers! Published by the NSS Vertical Section, the "Nylon Highway" is available for \$3/yr. BETTER YET—contribute an article which would be of interest to other vertical cavers!

Cheryl Jones, Editor
319 Kilbourne Ave.
Appalachia, VA 24216

sent to the editor: Jim Moore, P.O. Box 3466, Las Cruces, NM 88003.

The new regional correspondent for the SWR is Randy Boyd. Regional news should be sent to him at 72 Hacienda, Los Alamos, NM 87544.

TSA

The Texas Speleological Survey has recently straightened its files and reports that there are around 2,000 caves in Texas. Exact numbering is not complete as of yet.

A cave has been discovered on the Mesa de Anguilla inside Big Bend National Park by some Dallas mountain climbers. The people who went in estimate the depth at somewhere between 100 and 200 meters. The limestone potential on the mesa is 400 meters. A trip is planned by some Austin cavers to check the pit in the near future.

The weekend of February 19-20 saw Bill Russell leading a trip to Hays County. His efforts and the people with him turned up three new caves and several leads. All the caves were small with the longest being approximately 20 m. long.

The Texas Caver is back in print with James Jasek as editor for the 1978 year. Inquiries concerning subscriptions should be sent to James at 1019 Melrose, Waco, TX 76710.

VAR

The Virginia Commission on the Conservation and Use of Caves was established in March, 1978, by the Virginia General Assembly to make recommendations to the governor and the General Assembly by Oct. 1, 1978. This is the first commission ever established by any state government to study the use and conservation of caves in general. It should provide an overview of the problems

of cave use and conservation in Virginia and it is hoped a more all-encompassing solution to the problems of cave use and conservation will be developed. For more information contact John M. Wilson at P.O. Box 7007, Richmond, VA 23221.

(Congratulations, John, on your effort in getting this commission established and best wishes in the capacity of acting convener. Let's hope other states follow suit. clc).

Simmons-Mingo/My Cave Connection

Virginia area divers have once again added a significant amount of sodden passage to a major VAR cave system by penetrating two extensive sumps to connect My Cave to the Simmons-Mingo system.

November 1977: David Morrow, Carl Cowart, John Burdiss, Forrest Wilson, Silva Catinella, and Bob Thrun started to push the My Cave system siphon. By the luck of the draw, Carl Cowart and David Morrow were the divers while the rest acted as support team. David Morrow pushed the system about 300' then, short on time, returned.

December 1977: Forrest Wilson, David Morrow, and John Burdiss returned to complete what they could. The call for help had been unanswered, yet the three divers completed the siphon. After exploring for eight hours they came to the second siphon. After returning for gear, the team sent diver Forrest Wilson into the sump until he ran out of line and was forced to turn around. It was at this point that he found that the line led back into solid wall. However, the luck of the cave diver was with him and he managed to rediscover the way home. After the exhausting task of dragging the gear out without porters, the three collapsed into their tents.

February 1978: Forrest Wilson, Silva Catinella, Ian Lewis (Australian cave diver), David Morrow, John Burdiss, and Carl Cowart returned to complete the system. After getting all the gear through the cave to the Main

Room, the dive teams were set up to go through in sets with Forrest and Silva the first two divers. Upon setting up the tanks, however, the divers discovered a major air leak in Forrest Wilson's tank. After close inspection, three of the six tanks were considered to have leak problems and the two other divers with these tanks were forced to abort the dive. Taking the remaining tanks, John Burdiss, Ian Lewis, and David Morrow entered the sump. Finally, at 7 o'clock the next morning, John Burdiss reported the news: the cave system of My Cave can now be considered a part of Simmons-Mingo.

The Virginia Region is currently forming a speakers' bureau to help region cavers further their caving knowledge and spice up sometimes-dull grotto meetings. Speakers should have sufficient experience and training to competently develop their subject but are promised an attentive audience of new faces. Sort your slides, sharpen your expertise, and write Cheryl Jones, 319 Kilbourne Ave., Appalachia, VA 24216.

WESTERN REGION

A formation repair project was recently completed in Pearl Cave. Located in the volcanic area of the Mother Lode country, Pearl Cave received the tender loving care of Bruce Rogers, John Tinsley, and other SFBC members.

The final draft of the New Melones Cave Survey has been accepted by the Army Corps of Engineers. Spearheaded by Mark Grady and Mike McEachern, this project was conducted to inventory the caves which will come under the influence of the New Melones Dam and associated recreation areas. The biota of these caves was also identified and studied. Andy Grubb, Steve Winterath, and Don Broussard also assisted during much of the project.

The Helbing Ranch near Fiddletown in the Mother Lode country is for sale at \$100,000. Several moderate-sized caves are located on this 207-acre property. Violin and Fiddle Caves as well as several smaller ones are on the ranch. Dave Cowan is coordinating an attempt to purchase the property. Contact Dave if you are interested in getting on this exceptional conservation opportunity. ●

MISSOURI SPELEOLOGY

Journal of the Missouri Speleological Survey

The subscription rate is being raised from \$4 to \$5 on June 1. Subscriptions to Volumes 16, 17 and 18 (1976-78) will be honored at the current price until then. Back issue prices will be raised from \$1.25 to \$1.50 (\$2 to \$2.50 for double issues).

Planned for Volume 16—Dye Tracers Cookbook (by Tom Aley); Biology of Cathedral Dave, Crawford County, Missouri.

Planned for Volume 17—Caves of Reynolds and Shannon Counties, Ozark Hydrology—a Predictive Model.

Planned for Volume 18—Reprint of Gerard Fowke's 1922 paper on Archaeology of central Missouri Caves; Caves of Boone, Cole and Moniteau Counties; Caves of Pulaski County.

Selected Back Issues Include:

Volume 4, No. 1-2, "Cave Mapping—A Systematic Approach," by Lang Brod. Second Edition. 1970, 62 pp, 15 fig. (Double issue) \$2.00

Volume 10, No. 2, "Cave Regions of the Ozarks," by Luella Agnes Owen (partial reprint of the 1898 book with 14 historic maps and photos). 1968, 62 pp, \$1.25.

Volume 12, No. 1-3, "Caves of Jefferson County, Missouri," ed. by David Webster, 1971. Maps and descriptions of over 35 caves. Counts as 3 single issues. \$3.75.

Volume 13, No. 4, "Geology of Twin Pit Cave, Boone County," by Carol Kruesi. 1973. 40 pp, 19 fig. and plates. \$1.25.

Volume 15, No. 1, "A Pleistocene Fauna from Zoo Caves, Taney County, Missouri," by Clark H. Hood and Oscar Hawksley, 1975, 42 pp, 6 tables, 12 fig. \$1.25.

Volume 15, No. 3-4, "Caves of Christian County, Missouri," by Kenneth C. Thomson and Ronald L. Martin. 1975, 87 pp. (Maps and descriptions of over 130 caves.) Counts as 2 single issues. \$2.50.

All prices postpaid. Write for complete list of back issues. Address all orders to Alberta Zumwalt, Circulation Manager, Lohman, MO 65053. Make checks payable to Missouri Speleological Survey.

Order before June 1 to beat the price increases.

Newsletter Review

April 1978

John Baz-Dresch believes that "Flexane," an industrial urethane adhesive, is the best preventative yet for toe wear of caving boots. For details, see Feb.'78 *Underground* (M. Miss. Valley Grotto). Same issue advises that cutoff of funds for Missouri's Meramec Dam obliged Army Engineers to suspend permit system for surrounding caves; contacting Corps officials before visiting is still best.

Cueva del Brinco (Tamaulipas), already one of Mexico's largest, reached 6.5 km. during a Nov. '77 expedition. Progress in branches of the "World Beyond" trunk was arrested by a steep slope and swimway. Terri Treacy's writeup in Univ. of Texas Grotto's Jan. '78 *UTG News* is accompanied by line map, plus other Mexican updates, including Logan McNatt on Cueva de Infiernillo (4.6 km., with 105 leads!).

Cueva de Diamante (Tamaulipas), considered by some as Mexico's meanest because of its excruciatingly tight, hot fissures, was finally bottomed (?) over Christmas at -621 meters, making it the hemisphere's third (now fourth) deepest. Profile map showing two remaining leads complements impressions by Harold Goldstein and Tommy Shifflett in the Feb. D.C. (Grotto) *Speleograph*.

Predominately dry weather has made entry into Falls Cave—one of the Grand Canyon's most significant—marginally possible for the first time since 1972. However, the slightest rainfall in the area will certainly trap cavers, perhaps for good, warns Jerry Hassemer in Central Ariz. Grotto's Spring *Cave Crawler's Gazette*. Another myth debunked: Apache Death Cave, last stand of an Indian band and supposedly miles long, is more like a few hundred feet, says Bill Butler.

Mapping of Pot-o'-Gold Cave, a new lava-tube in Idaho's Shoshone region, complicated by baffling breakdown, has reached 1.7 km., with a fair amount to go. Unfortunately, vandalism of lava formations was noticed only a month after the cave's discovery, according to Frank Ireton in the Jan.-Feb. *Gem* (State Grotto) *Caver*.

Christmas Canyon Cave, in Wash.'s Mt. St. Helen's area, is singular for being developed by erosion of mud flow debris underneath a thin lava cap. Judging by seasonal water intake, the cave may be surprisingly extensive. Preliminary map accompanies Jim Nieland's report in the Dec. '77 Oregon Grotto *Speleograph*.

Speleo-suspense department: Joe Saunders' encounter with ghostly saltpetre miners in a Ky. cave. Naturally, we can't reveal the surprise ending, so check out the March '78 WSS *Wisconsin Speleologist*. Same

number offers tips by Mike Barden on making the cheapo Bluewater ascending box more sturdy and practical.

Interim map of "historic" Blowing Cave, in south Georgia's Grady Co., graces *Fla. State* (Cave Club) *Caver* for Fall '77. Frank Hutchison feels the cave's nature is such that it shouldn't need the security of a gate, compared with nearby Glory Hole, with which Blowing is confused.

An "affordable" electric cave light can be had for under \$20, per instructions of Alex Sproul in the Jan. '78 *Brass Light* (Richmond Area Speleo. Soc.). Key element is the somewhat hard-to-find "Eveready 565" rechargeable alkaline-manganese battery, which can be broken down into four cells and carried on a belt like a string of sausages. Further analysis by John Wilson of Va.-W.Va. cave registers furnishes more evidence as to who goes caving and why some caves become popular. Well-worn paths to entrances both facilitate visitation and offer clues as to traffic, while removal of climbing aids (such as the ladder in Va.'s Breathing Cave) can substantially thin crowds.

Revised standings of U.S. and world long lava caves (Halliday & R. Crawford) add Idaho's Pot-o'-Gold, New Mexico's Truett Guano Cave and Cueva de los Verdes (Canary Islands). Consult July-Aug. '77 *Cascade* (Grotto) *Caver*.

Caving in trees? Strange but possible, judging by an article reprinted by Boston Grotto in its Aug.-Oct. '77 *Massachusetts Caver*. Seems that certain species of large, live trees in Costa Rica's rain forest are commonly hollow and support bat colonies and other cave-associated life. Illustration shows person negotiating tree "pit" with Jumars.

The thrill of discovery of impressive new caves in the fastness of Tenn.'s Obey River Gorge is retold by Ray Lewis in Smoky Mtn. Grotto's Nov. '77 *Speleotype*. The author is content to let others map his Xanadu-Zoroaster's system (over 4 miles so far) while setting off in search of other finds hopefully lurking in the wilderness. Same issue: current Tennessee long and deep cave statistics (Clark, Smith & Smyre) show 31 over 3 km. long and 29 200+ feet deep (led by Cumberland Caverns and Bull Cave, respectively), plus uncensored version of the Grassy Cove story (see also July '77 *NSS News*).

A spelunking doctor, not affiliated with a caving group, was late for surgery one day. He was found to have descended solo on a too-short rope into the Echo Pit entrance of Missouri's Crevice Cave. Publicity from resulting rescue, first of its type in Perry Co., caused closure of all Crevice entrances to sport cavers and other problems in the area. Wrap-up by Jim Palmer and Bill Eddleman in *Southeast* (Mo. Grotto) *Caver*.

State officials are interested in buying Morrell (Worley's) Cave, well-known east Tennessee landmark. Though much vandalized in parts, the 19,000' long cave is very much worth saving, exhorts Dick Geer in N. Indiana Grotto's Feb. '78 *Michiana Caver*. He urges letters of support to the Tenn. Dept. of Conservation, 2611 W. End. Ave., Nashville, TN 37203.

Draining by John Wilson's engineering crew of perennial obstacle "Penn. State Lake" bids to increase exploratory and mapping efforts in "upstream" portions of Butler Cave (Va.). The restored Butler homestead will be new staging point for BCCS expeditions, but persons showing up without advance notice can expect to be out in the cold. For information on same and maps available, contact



KENTUCKY SPELEOFEST

PRE-REGISTRATION :

Kentucky Speleofest
2122 Millside Drive
Louisville, Kentucky 40223

- Caving activities
- Exchanging ideas
- Good camping facilities
- Banquet
- Bluegrass Band
- Much more

at Camp Carlson

Meade County, Kentucky

Memorial Day Weekend

May 26, 27, 28, 29

vary or fade. Dip (of sedimentary layers), faults, anticlines, synclines, overthrusts, sinks ("dolinas"), etc., are also shown. Cartas geologicas are not available for quite as many areas as are the cartas topograficas.

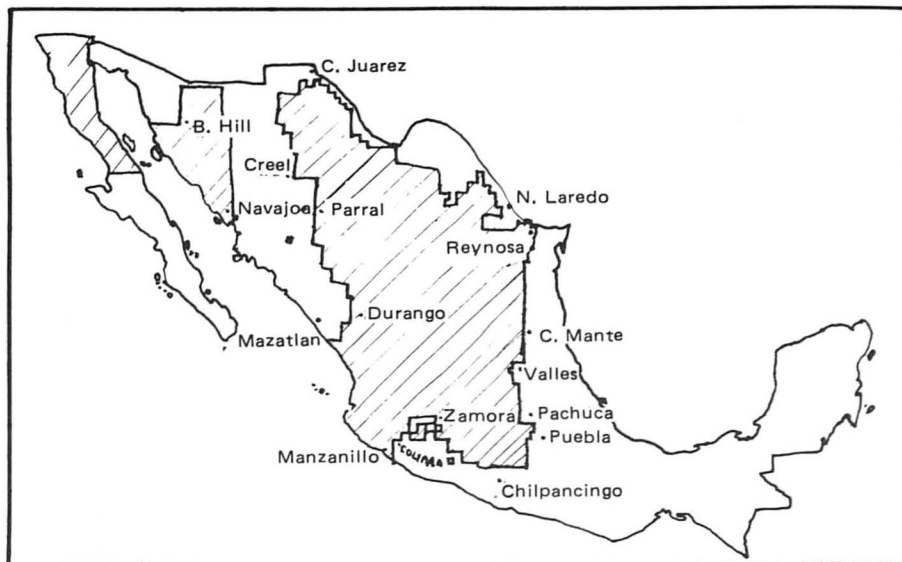
I recently wrote to Mexico and discovered a price structure which works against U.S. customers. My 40-plus sheets were all purchased on visits to the agency's offices in Monterrey and the Distrito Federal. At offices, sheets cost 20 pesos each (about 88 U.S. cents). By mail, the price was to be the five-times-higher price of 100 pesos (\$4.40 U.S.) per sheet, prepaid in pesos by cashier's check drawn on a Mexican bank. (One San Antonio bank charges an extra \$1.50 for providing such a cashier's check, and most other local banks lack even that service.) I wrote back questioning the 500% price rise and received a polite reply that I was welcome to receive the "precio nacional" by coming to any of their outlets in Mexico.

The eight branches (Agencias DETENAL) to visit for the lower price are listed on the index map, with two new branches added between July 1, 1977, and January 1, 1978. Three are in Mexico City, one each in Guadalajara, Leon, Monterrey, Mexicali, and San Luis Potosi. The two that I visited were very satisfactory, though the one in Monterrey seems to stock only north-eastern Mexico, referring me to the Mexico City office for sheets from eastern San Luis Potosi. The index lists private distributors in 14 other cities. At Nuevo Laredo in a bookstore listed, I found the staff polite, the price 20 pesos, but the stock small and almost useless (soil use and soil chemistry in the Reynosa, Tamps., area).

DETENAL is an acronym for Direccion general de Estudios del Territorio Nacional. Until late 1977, it was CETENAL (Comision de Estudios etc.). The old acronym appeared in the phone directory, helpful in locating the address if you are in town and can remember the acronyms.

By mail purchases are from DETENAL, Departamento de Agencias, San Antonio Abad 124, Mexico 8, D.F., Mexico. If you have any acquaintance in Mexico (country), you may get the lower "national price" by mailing from a Mexican address. You could send your friend a money order in dollars, since exchange dollars-pesos is much more available and better priced at Mexican than at U.S. banks. Any extra postage charges are not likely nearly to approach the 500% markup to the U.S. By the way, this particular office is easily reached by metro, San Antonio Abad station (line 2, direccion Tasquena).

The index map, unlike the ones of



Shading shows approximate areas covered by Cartas Topograficas.

USGS, covers the whole country and shows quite a few different types of maps. Termed Avance Cartografico, it is issued four times a year. I was charged 88 cents for my first copy, mailed the current one free with the infamous offer to sell at \$4.40 per map. A friend was given a free but three-month-outdated index at the poorly-stocked Nuevo Laredo store.

Types of maps are topographic 1:50,000, geologic 1:50,000, soil use 1:50,000, soil chemistry 1:50,000, potential use 1:50,000, five somewhat different types of urban maps at 1:50,000 and 1:10,000, topographic 1:250,000, aeronautic 1:250,000, climate 1:500,000, tourist 1:1,000,000, and, listed on the back of the index, many types of aerial photographs, negatives and satellite photographs, from 1:2,500 to 1:1,369,000.

Speaking of aeronautic maps, our country's FAA issues these covering all of Mexico at 1:1,000,000 and for much of the country at 1:250,000. Mine have accurate (for the small scale) contours, but horribly inaccurate road locations. San Antonio's main airport has these FAA maps available at a small private

chart dealer on the airport grounds—if you want small scale Mexican contour maps, they are probably available at some large nearby airport.

Persons wanting sample Mexican sheets and unfamiliar with which areas are interesting, might consider the following: The sheet containing Grutas de Cacahuamilpa (near Taxco), geologic (or topo 1:50,000) E14 A68, shows two rivers ending blindly a few km. west of the Grutas (a commercial cave). These two rivers converge underground and emerge a few hundred feet apart just downhill from the commercial cave mouth. F14 A69 is the "El Abra" area, with many sinks and a resurgence (renacimiento). Cueva de Brinca should be on F14 A18, since all of the landmarks enroute are on the sheet north, which I own. Such cave areas as Bustamante, Xilitla, San Juan, Juxtahuaca, Huatla, and all of Oaxaca, Chiapas, and the Yucatan peninsula have no maps available at this time.

(Editor's note: Samples of these high-quality maps were submitted with this article but space limitations precluded them from being printed.) ●

Caves of Hong Kong. 73 pp, 95 b/w photos, 12 maps, colour cover. Text in Chinese, but the explorer should have no difficulty in locating the caves from the maps. \$5 surface mail; \$7 air mail.

Kweilin Cave—a set of 12 colour postcards of Reed Flute Cave, Crown Crag Cavern & Seven Star Cavern in folder with short description in English and colour cover. The set for \$2.

Beautiful Kweilin—a set of 12 colour postcards, 2 depict Lungtin Cave and Luti Caverns, the remaining 10 are of fantastic tower karst scenery. In folder with short description in English, Arabic and one other language! The set for \$2 or two sets for \$5 air mail.

**From: Tony Oldham (NSS No. 11477L)
Rhychdywr
Crymmych
Dyfed SA41 3RB
U.K.**

What would be the emotions of persons trapped for days deep in a Mexican cave, especially for a diabetic? Consult Steve Knutson's diary (Willamette Valley Grotto Summer '77 *Underground Express*) of last spring's fiasco in *Sotano de San Agustin*, when a careless caver exiting a drop left the rope hung up out of reach. Same issue publishes map of Calif.'s *Bigfoot Cave* prior to *Meatgrinder* connection which broke U.S. depth record.

One of the more substantial discoveries in West Va.'s rugged Tucker Co. since inception of Monongehela Grotto survey project has been '76 *Cave*. Summary, with map, by Alan Carpenter and Ray Garton is featured in Jan. *Karst Kaver*. Almost 2,000' surveyed seems to be about it.

Two gallons of acid were employed by Miles Drake in breaking up trash plug in entrance of long-promising *Simmons Pot* (Randolph Co., WV). Multi-drop extension may prove another entrance to the *Simmons-Mingo* system. Details in Nov. and Dec. '77 *Potomac* (Speleo. Club) *Caver*.

It wasn't the first time cavers have been taken for prowling criminals, but the corralling of a Mo.-Wisc. party near a St. Louis area cave by helicopter-borne lawmen was probably unprecedented. Don Monnot recommends warning the police first before visiting *Breezy Pit*; see *Meramec Valley Grotto's March Meramec Caver*.

Mike Dyas

Cave Etiquette Needed

As summer approaches, many will find the time to see more caves. Undoubtedly, many of us will stop at a commercial cave. Please keep the following things in mind:

In the past, too many commercial caves have had bad incidents with cavers and has given the NSS a bad name. We on the Commercial Caves liaison committee have been trying to overcome that.

It is bad policy to make fun of the guides, who quite often are less knowledgeable about caves than we are. Part of their talk is for entertainment rather than the gospel truth. It is also bad policy to take your flashlight on the tours, as it is very distracting to others. It is important that the guide have good control of the group.

If you have any complaints about the tour, policy of the commercial cave, or any other comments, it might be better to contact the Commercial Caves Liaison Committee and let us try to handle it tactfully. We have good rapport with most of the commercial cave owners. Since most commercial cave owners prefer that cavers not be

around, it is best to play tourist. Should you feel any comment is necessary, it would be best to contact the manager or guide privately so that there is no disruption of business or tours.

Basically, good common sense should be used. Commercial cave owners are getting tired of having cavers come into their gift shop in caving clothes, asking for discounts, making fun of the guides, acting like know-it-alls on the tours, as well as too many other actions too numerous to mention.

Commercial Caves Liaison Committee
Bob Liebman
P.O. Box 441
Lewisburg, WV 24901
(304) 772-5049

Carnival Set For July

The 1978 SERA Cave Carnival will be held on 1-3 July at the Coon Holler Campground right next to Cumberland Mountain State Park a few miles south of Crossville, Tennessee. This Tennessee super caving event features the deep caves, deep pits and long caves of Grassy Cove (the largest sinkhole in America) and the western escarpment of the Cumberland Plateau. A few of the caving highlights include:

- Ferris Pit* 251' free drop.
 - Jewett I* 615' total depth, 1½ miles long.
 - Zarathustra's Cave* 8+ miles of walking passage.
 - Gouffre* 509' total depth, 241' entrance drop, 1½ miles long.
 - Stamps Pit* 192' drop.
 - Run to the Mill* 440' total depth, 167' pit, 3 miles long.
 - Bugger Hole* 145' free drop into a giant room.
 - Xanadu* 7+ miles long, big rooms, monster bore hole trunks.
- Plus, the usual bonfire, great caving fellowship, merry making and good times!

The registration and camping fee allows you to camp from Friday night through Monday. Pre-register and save. Children under 12 are free and a few trailer hook-ups are available at no additional cost. A limited supply of guide-books will be available at the campground for a minimal fee. Pre-register and reserve your copy. For cost and registration information, write to Bill Deane, 312 Hermitage Rd., Knoxville, TN 37920 before 15 June.

NEW FROM CRF

CAVE BOOKS

GEOLOGIC FACTORS INFLUENCING SPELEOGENESIS IN THE CAPITAN REEF COMPLEX, NEW MEXICO AND TEXAS, David Jagnow (1977) Ph.D. candidate, University of New Mexico.

A landmark dissertation. A must for anyone interested in the origin of caves in the Guadalupe Escarpment and Carlsbad Caverns National Park. \$7.00

CURRENT TITLES

CRF PERSONNEL MANUAL, Second Kentucky Area Edition (1975).*

Fully revised, enlarged and illustrated, this manual provides technique and management guidelines for "project-oriented caving." Contains elaborate chapters on underground surveying and on safety and rescue procedures. Back cover shows a line map of the Flint-Mammoth Cave System (167 miles). Fits three-ring binder. 122 pp; 8½ x 11". \$6.00.

CRF

CRF ANNUAL REPORTS 1974, 1975, & 1976 \$2.00 ea.*
1977 \$3.00 ea.

FLINT-MAMMOTH MAP CARD, Second Edition (1975). .50 or 10 for \$2.50.

MAP OF LEE CAVE, MAMMOTH CAVE NATIONAL PARK (1975). "Suitable for Framing." \$4.00 (with Gazetteer).

NEW CAVE MAP CARD, CARLSBAD CAVERNS NATIONAL PARK (1976). .60.

FLINT RIDGE CAVE SYSTEM MAP FOLIO (1966). \$1.50.*

CHECKS PAYABLE TO:
CAVE BOOKS

1909 McGavock Pike
Nashville, TN 37216

Postage: .50 each book or map

In Tenn. add 6% sales tax

Other titles available upon request.

*Limited Supply Available

CAVE RESEARCH FOUNDATION

NOTES and NEWS

Wrong Address For Map Salon

The wrong address for submitting maps to the 1978 Cave Map Salon was given in the March *NSS News*. The correct address is: Jan Knox, 1978 NSS Cave Map Salon, P.O. Box 13165, Austin, TX 78711.

Congress Of Grottos

This year's Congress of Grottos will be in mid-June and we hope to have the final agenda by June 1—so now is the time to submit your issues.

The Issues Committee can edit, rewrite, and combine similar issues, but the burden of submitting the ideas rests with you.

We can be of special help to NSS directors, committee chairmen, etc., who are interested in guidance from the membership on some special issues via the Congress.

Submit issues to: Barry Chute, Issues Chairman COG, 15539 Old Columbia Pike, Burtonsville, MD 20730.

Another New Grotto

The Standing Stone Grotto, G-248
c/o Mike Catney
1345 Cincinnati-Zanes Road, SW
Lancaster, OH 43130

The name is taken from an Indian name for a Lancaster, Ohio, landmark—Mount Pleasant. Many members of this group began caving together as far back as 1964. Unlike many Ohio grottos, they tend to cave in West Virginia and Virginia.

B.O.G. Sites Needed

Each year at the annual convention, the Board of Governors selects two locations for its fall and spring meetings. These spots are normally in geographically appropriate areas to allow cavers from various parts of the country to visit and meet with their representatives and observe first-hand the workings of the Society. Last year's meetings were conducted in Albany, N.Y., and in Vancouver, WA.

Bids are needed immediately for locations for the fall, 1978 meeting (normally in October) and the spring, 1979 meeting (normally in March). Hosts must assume the tasks of locating an appropriate meeting hall, arranging transportation to and from the nearest

airport for Board members, arranging bedroll space for out-of-town guests, and arranging for any parties or banquets.

If your grotto or organization would like to host one of these Saturday meetings, please make your desires known immediately to Bob Liebman, P.O. Box 441, Lewisburg, WV 24901, or call him at (304) 772-5049.

'Tennessee Caves' Sold Out

Descriptions of Tennessee Caves by Larry E. Matthews (1971) is now out of print. The Tennessee Division of Geology sold its last copies sometime in January, 1978. The Department says that they will probably reprint the book sometime in the next couple of years, but for the time being both Barr (1961) and Matthews (1971) are unavailable.

Arthur W. Davis

Arthur W. Davis, NSS 3436, Indianapolis, Indiana, died Thursday, March 23 at the age of 63. Art, who was a Fellow of the Society, was well known and admired by many cavers throughout Indiana and the midwest. Although he missed being a charter member by a few months, Art has been active in the Central Indiana Grotto for over 22 years. He was elected vice-president of the Grotto for the first time in 1957. He subsequently served the Grotto as president, executive committee member, advisor, and many times as a member of the Cave Capers Committee. In April 1956, Art discovered the lower level of Sullivan Cave, now one of Indiana's best known caves. On subsequent trips that year he discovered and named the Spiral Room and the Quarry Room. In July 1959, Art led a trip which established a voice connection and then dug through to open the Speed Spring Entrance to Sullivan Cave.

Art was also active in the early exploration of the Dog Hill-Donnehue Cave System which was one of his favorite caves. He took charge of the mapping of the cave and discovered many new passages in the upper level of Donnehue Cave including the Davis Crawl, which bears his name. Along with Pat Humphry, he prepared the slide series on the Dog Hill-Donnehue System which in the NSS Audio-Visual Library.

Tom Rea

Sign Painter Needed

The McFail's Cave Committee is seeking the services of a silk screen printer or sign painter to make approximately 30-60 "No Trespassing" signs for the Society's property near Cobleskill, N.Y. The signs should be constructed of sturdy material and be reasonably

priced. For further information on how you can have your work prominently displayed in the Northeast, please contact: Bob Addis, 121-125 LaFayette Rd., Syracuse, NY 13205.

Camera Found At Fern Cave

Steve Pitts, 706 Huckleberry Lane, Birmingham, AL 35226 (205) 823-3121, found a 35mm camera at Fern Cave recently. If you lost one there, please write or call him with a description and you can have it back.

Int'l. Journal Of Speleology

Arrigo Cigna, President of the International Union of Speleology, announced recently that arrangements have been made for the International Journal of Speleology to become an official publication of the International Union.

The new editor of the journal is Dr. Alfredo Bini of Milano, Italy, who is known for his work in the field of karst geomorphology. Dr. Bini requests that

WETSUITS FOR CAVERS!

SEE HOW FAR YOUR MONEY CAN GO—OUR KITS ARE EASY TO ASSEMBLE AND INEXPENSIVE. WRITE FOR OUR BROCHURE

WILDWATER DESIGN KITS
VIA BOX S' PENLLYN, PA. 19422

RARE BOOKS/OUT OF PRINT BOOKS
EXHIBITING
at
NSS CONVENTION 1978
RARE and OUT OF PRINT
BOOKS
on
CAVES and CAVING
(plus)
Select 18th and 19th century
Prints of Caves and Bats
Emily Davis Mobley
PO Box 333
Wilbraham, MA 01095
CAVE POSTCARDS, BAT BELT BUCKLE

SINGLE ROPE TECHNIQUES—A guide for vertical cavers by Neil R. Montgomery & Donna Mroczkowski. 120 pp, 23 photos, as reviewed in the NSS News Dec. (1) 1977. \$10 post free from T. Oldham (NSS 11477L), Rhychydwr, Crymmych, Dyfed SA41 3RB, England.

cavers, speleologists, museums, and university departments interested in subscribing to the journal send their names and addresses to him as soon as possible.

In addition, Dr. Bini is also requesting that speleologists interested in contributing to the journal begin sending papers.

More details will be announced at a later date. Papers and letters stating interest in subscribing should be sent to: Dr. Alfredo Bini; Editor, International Journal of Speleology; Via Bernardino Verro 39/C; I-20141 MILANO, Italy.

Cave Rescue Seminar

The National Registry of Emergency Medical Technicians has granted the National Cave Rescue Seminar 30 credits for the continuing education of EMT's. This recognition is the highest consideration which can be given to any EMS-related program, and the NCRC is most pleased at the National Registry's evaluation and decision. Currently, the seminar is also approved and certified by the National Association of Search and Rescue (NASAR).

Cavers and others who hold or are seeking EMT certification may still register for the three-day lecture portion or for a very limited time in one of the few remaining full five-day spaces limited to less than 60 persons.

Contact: National Cave Rescue Seminar; c/o Terry Jones; 16240 San Pedro, Box 257; San Antonio, TX 78232, (512) 494-6455.

Stop Speleothem Sales

The subcommittee to Stop Speleothem Sales is understaffed and needs your help. If you know how to obtain copies of laws from anywhere in this country or the world pertaining to protection of speleothems, please send copies to William H. Tanger III, 425 Allison Ave. SW, Roanoke, VA 24016. The group is also looking for translators of Hungarian or Spanish.

Members Recruitment Kit

The Membership Committee has put together a membership recruitment kit which is available upon request to any NSS member. As most of us are aware, the Society has been experiencing a decline in membership over the last several years. The ultimate effect of this decline in NSS membership is a smaller and weaker organization which is less effective in providing services to members and achieving its goals of conservation, etc.

You can help reverse this trend by volunteering your services to assist the

Society in extending its membership benefits and services to those individuals with a serious interest in caves, but who are not now NSS members. The membership kit contains membership application brochures and a list of suggestions for distribution. Write to: Tom Cravens, St. Louis Community College, 11333 Big Bend Boulevard, St. Louis, MO 63122.

Cavers Needed For Mexican Trips

Experienced vertical cavers interested in exploring and mapping four new multidrop high elevation arroyo caves in eastern Queretaro in May and early June should contact Roy Jameson and Pat Mothes, 1801 Alameda, Austin, TX 78704, (512) 441-6334 before May 10. Two of the caves have strong air flow, require wet suits, and have been mapped to pitches at -500 feet.



Letters

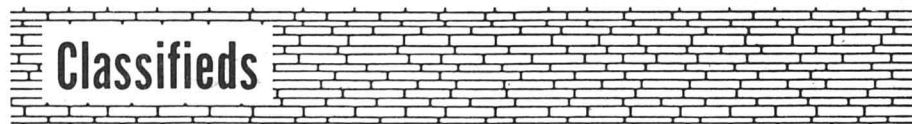
Editor:

Ian Ellis is either deliberately misrepresenting his product, or else is simply ignorant of modern battery technology. In his advertisement in the Dec. and Feb. '78 *News*, he states the chemical system for the Koehler Wheat Lamp battery was selected by the manufacturer for its "good power, good reliability and long life characteristics not currently available in a sealed system." This is utter nonsense, intended only to sway the uninformed. ALL lead-acid batteries, including the Wheat Lamp battery, consist of lead plates and a sulfuric acid electrolyte. The basic chemical system is the same in all, regardless of whether the battery is sealed or not. To state that the Wheat Lamp battery

has some special electrical advantage over sealed lead-acid batteries is totally false and misleading. In terms of power, reliability, battery life and rechargeability, the electric caver will find it nearly impossible to detect any performance differences among the various brands of lead-acid batteries on today's market, sealed or not.

The Wheat Lamp battery is a vented design, not because it offers any advantages over a sealed system, but because it was designed decades ago, before sealed systems were possible. The vented system has since been rendered largely obsolete in most applications by sealed systems. Even automobile batteries are switching over to a sealed design. It is not unreasonable to expect miner's lamp batteries to follow the same route eventually. There is a very good reason for this. Sealed batteries do not merely "reduce the direct spillage of the contents," they eliminate spillage completely. Strips of sealing tape or screws are not required.

A second misleading statement is the commonly-seen claim of 500 complete charge-discharge cycles for the Wheat Lamp battery. No Wheat Lamp owner will ever see this kind of performance. 500 complete recharges is a manufacturer's claim. The same company also advertises its batteries as "spillproof and leak-proof," when it is a well-known fact they are not. Such high performance can only be obtained under carefully controlled laboratory conditions of temperature, constant replenishment of battery water to maintain a constant specific gravity in the electrolyte, and carefully controlled rates of discharging and recharging, impossible for any caver to duplicate in the field. If a sealed lead-acid battery was operated under the same laboratory conditions, over a thousand recharges could be obtained. In actual caving use, after a couple of hundred complete charge-discharge cycles, the Wheat Lamp battery capacity will begin to diminish like any other lead-acid battery, sealed or not. By the 500th recharge, it will be down to about 50% of its original capacity. This is due to plate corrosion by the sulfuric acid electrolyte. A gelled electrolyte can sometimes reduce the rate of this corrosion and give longer battery life, but it is impossible to eliminate it completely. This is why most lead-acid batteries will have to be replaced after about five years of usage, but their very low cost makes them quite practical for caving use.



Classifieds

Classified ads are only for the use of individual members to sell personal items, locate needed equipment or services, or make personal announcements. They are not for trade use. Remittance must accompany the copy for classified ads. Make checks payable to the National Speleological Society.

Rate: Ten words: one dollar (minimum fee). Additional words: five cents each. Count your name and address as two words. A five percent discount applies if you run the ad three times, a ten percent discount for six times.

WANTED: Old electric trains—toy trains. Any age—any condition. Will trade caving gear or cash. Bob Liebman. P.O. Box 441, Lewisburg, WV 24901.

NEEDED—Articles, stories, accounts, cartoons, poems, etc. for Inside Earth #5. Inside Earth, P.O. Box 8500 UT Station, Austin, TX 78712. (12-5)

GOING TO CONVENTION thru St. Louis? Crash here. Come to speleo-massage workshop there. Elaine Hackerman, 4350½ Fairview, St. Louis, MO 63116, 314-665-8779.

SOUVENIR '77 NSS CONVENTION T-SHIRTS available. Black on Gold. Harters, 835 St. Johns Ave., Highland Park, IL 60035. Specify Size, \$5 ppd.

WANTED: Miners Candleholders, oil lamps, carbide lamps, safety lamps. Ray Setteur, 6917 Regency Dr., Parma, OH 44129. (216) 843-6649.

The Koehler Wheat Lamp is a good lighting system when properly used. It is reliable, rugged, and offers several fine features useful to cavers. But it should stand on its actual merits, not inflated claims. Many Wheat Lamp features advertised as "unique" are in fact available in most other commercial lighting systems, and there are useful features in other systems not available in the Wheat Lamp. Selecting a lighting system is largely a matter of personal taste, and the prospective electric caver should not be misled into thinking otherwise.

Anyone wishing to verify the points made in the above letter may do so by contacting the following companies. Sealed lead-acid batteries: Globe Battery Division; Globe

Union, Inc.; 5757 N. Green Bay Ave.; Milwaukee, WI 53201, (414) 228-2394. Koehler Wheat Lamps: Koehler Manufacturing Company; Marlborough, MA 01752, (617) 485-1000.

Chris L. Wolf
Indianapolis, IN

Editor:

Guidelines on advertising from the Better Business Bureau include "advertising shall offer merchandise or service on its merits and refrain from unfairly attacking competitors or disparaging their products, services, or methods of doing business."

Since I understand Mr. Wolf is the general manager of Cave Lights (another advertiser in the *NSS News*), and I believe the Letters to

the Editor is no place for free advertising, I do not feel it is appropriate for me to discuss the defects in his argument.

In all respects I intend that the Speleoshoppe shall build a reputation that I personally may be proud of. Customers who feel advertising is unclear, or may be improved upon, may communicate with me directly and find that I will be responsive.

Perhaps the Society could adopt an impartial advertising ombudsman so that all concerned may resolve their differences without taking up valuable editorial space in the *NSS News* that could be put to better use than one (or two) self-serving, one-sided arguments. The *NSS* membership deserves a more rational analysis.

Ian Ellis
Speleoshoppe

BOB & BOB

VERTICAL EQUIPMENT

Climbing ropes

- 7/16" PMI (any length) 23 ft.
- 7/16" Bluewater II (any length) 23 ft.
- 7/16" Bluewater Super III (any length) 25 ft.
- 7/16" Goldline (any length) 25 ft.

Carabiners (Liberty brand)

- Oval 2.50
- Locking "D" 3.25
- Brake Bar (SMC) 1.20

Sling Materials

- 1" tubular sling (color is usually lime green)11 ft.
- 2" seat belt webbing11 ft.
- 9/16" tubular sling06 ft.
- 5/16" Bluewater II20 ft.
- 5/16" Bluewater III20 ft.
- 5/16" PMI20 ft.
- 5/16" Tenstron06 ft.
- Buckles for 2" webbing85 ea.

Harnesses

- Adjustable Swiss Seat 4.75 ea.
- Adjustable Texas Seat 6.50 ea.

Racks

- Bluewater stainless steel rack 7.95
- Bluewater brake bars (these brake bars will work only with Bluewater racks) 1.40
- PMI Rack (uses SMC Brakebars) 8.25

Chest Boxes

- Gossett Chest Box (Repair parts available) 20.00

Cable Ladders

- Pierre Allain (10 Meters) 37.50

Jumars

- 36.75 pr.

- Complete supply of repair parts available ship: 1.25

Gibbs Ascenders

- Spring Wire each: 10.50
- Quick Release each: 12.25

Complete supply of repair parts available

Cyalume Light Sticks

- 1.25 each; 3 for 3.45

INSIDE EARTH No. 4

- 2.50

Continuous oval rings for linking carabiners

- .. each: .60

Knee Pads

- Judsen 3.50 pr.
- Rock Master 7.95 pr.

KESON Open Reel Fiberglass Tapes

- Graduated in feet only, 100 ft. 17.50
- Graduated in feet/meters, 100 ft/30 m. 18.50

NEW ITEMS: Canvas Grip, \$1.50 for 8-oz jar; Joe Brown Climbing Helmets (ask for sizes and prices); Rope Washer \$12.00

- Discovery at Rio Camuy (Gurnee -- Hard) 6.00
- Single Rope Techniques (Montgomery -- Soft) 8.50
- Meramec Caverns-Legendary Hideout of Jesse James... 4.50
- Cavers, Caves, Caving (Hard) 12.50
- Alpine Karst (Soft) 2.00
- Jewel Cave Adventure (Soft) 5.50, (Hard) 10.50
- The Longest Cave (Hard) 12.95
- 1976 Cave Management Symposium Proceedings 9.00

HELMETS & PARTS

- Fibre-metal helmet with L-1 bracket (chin strap not included) Color yellow 7.25
- (Phos. blue) 7.95
- Chin Strap 1.00

Complete supply of repair parts available.

Premier brass carbide lamps:

- with Justrite 4" reflector 9.95
- with Justrite 2 1/2" reflector 8.50
- with Premier 2 1/2" reflector 8.50
- Complete supply of repair parts available. shipping .65
- Tip Cleaner90
- 4" Parabolic reflector (less lighter) 3.00
- Thick gasket (3/16")18
- (normal gasket is 1/8" thick)

JUSTRITE ELECTRIC

- Complete electric headlamp with battery pack—#1904-0 (less batteries) 7.25
- Headlamp unit only without battery pack #1904-2 ... 5.00
- Complete supply of repair parts available.

FLASHLIGHTS

- Everready, Skipper Model: Waterproof, shockproof, floating
- "C" cell size ea. 2.25
- "D" cell size ea. 2.25
- minimum shipping .55

- Gloves (leather palm) Men's size. \$1.50 pr.
- Women's size. \$1.50 pr.

Add 10% for shipping.
Excess is refunded.

Write for complete price list.



Koehler



It's not practical to go caving in a three-piece vested suit. But no serious caver will be without at least three practical sources of light. If an electric lamp is chosen as a primary light, the serious caver will consider every component of the rig carefully: the battery, the cord, the headpiece, the bulb and overall engineering for durability, dependability, and maintenance features. Many cavers are choosing the Koehler Wheat Lamp.

THE BATTERY

- Tubular plate construction for heavy-duty, long-life use.
- Simple maintenance.
- 500 cycles average life in actual commercial use (as noted below).



Koehler lamps use a 4-volt, 15-amp hour rechargeable lead acid battery of a vented design. This particular chemical system is selected by the manufacturer with a particular regard for good power, good reliability and long life characteristics not currently available in a sealed system.

The battery can be repeatedly used one day, fully recharged overnight and used the next day to consistently give 10-12 hours of light with a 1.2 amp bulb for typically 500 cycles (giving a total of 6,000 hours of such battery use).

Made of high impact resistant polycarbonate, the case is narrow (2x5x7 inches), has reinforced corners, stainless steel cover and included moulded belt loops.

The efficient lead-acid system requires venting during charging, but plugs are avoided by using special traps that greatly reduce the direct spillage of the contents. Cavers should note that the battery is not totally sealed by design, and temporary tape seals for leakproofing during caving trips should be removed before recharging.

THE CORD

The heavy-duty cord has strain relief fittings at the battery. Laboratory testing has shown the durability of the cord under repeated flexing. The cord connects the battery directly to the headpiece, with no plugs to cause intermittent contact problems of loose connections.



THE HEADPIECE

The headpiece has several noteworthy features (particularly the dual-filament bulb). Inspect one, and personally evaluate the construction. Moulded in high impact resistant polycarbonate, the headpiece weighs 5½ ounces (#5200 model), is dustproof, fitted with a tempered glass lens and has a single knob to switch and focus the light of either filament.

THE BULB

Every bulb made for the Wheat lamp has two filaments. Note that these have a unique sophisticated precision construction, and are krypton gas-filled for long life. The standard 1.2 amp or 1.0 amp filaments are designed for a 275-hour filament life (550 hours per bulb). As the switch is rotated, each filament is alternately lit and focussed. Compare this bulb life and construction with the typical 15-hour rated flashlight bulbs in common caving use.

The BM30 bulb has two equivalent 1.2 amp filaments. The BM30A bulb has two 1.0 amp filaments, which give a slightly extended 15-hours of light per battery charge.

THE NEW HI-LO BULB

The new Hi-Lo bulb offers covers a **UNIQUE** benefit with the dual filament switching. The standard 1.2 amp filament may be used most of the time, but can be immediately switched to the **DOUBLY** bright 2.5 amp filament for special spot-lighting use, then back to the standard filament. [Higher current will drain the battery faster, but such use should be more limited in need, so the 60-hour special filament life is appropriately matched with the 275 hour standard filament.]

Note: All bulb life figures are averages.



AUTOMATIC CHARGERS

Automatic chargers for 110-volt mains use of 12-volt mobile use are available and both provide the matched voltage requirements to ensure longest battery life (without the damage that may be caused by an unregulated charger).

APPROVALS

The U.S. Bureau of Mines approval given to the Koehler Cap Lamp means the light has met standards specifying construction, durability, lamp life, light distribution, drop tests, safety and various other points detailed for laboratory testing. The lamp additionally has the approval of the Canadian Bureau of Energy, Mines and Resources.

Cavers should appreciate sharing many of the benefits designed for miners in a similar demanding underground situation. Since 1917 the Koehler Manufacturing Company has produced the Wheat Cap Lamps, and offers cavers the same high quality engineering and service that has established the reliability of their products.

For additional information, contact Ian Ellis, The Speleshoppe, P.O. Box 8044, Louisville, Kentucky 40208 or call 1-502-367-6292.

The National Speleological Society
Cave Avenue
Huntsville, Alabama 35810

Second Class Postage paid
at Huntsville, AL and at
additional mailing offices.