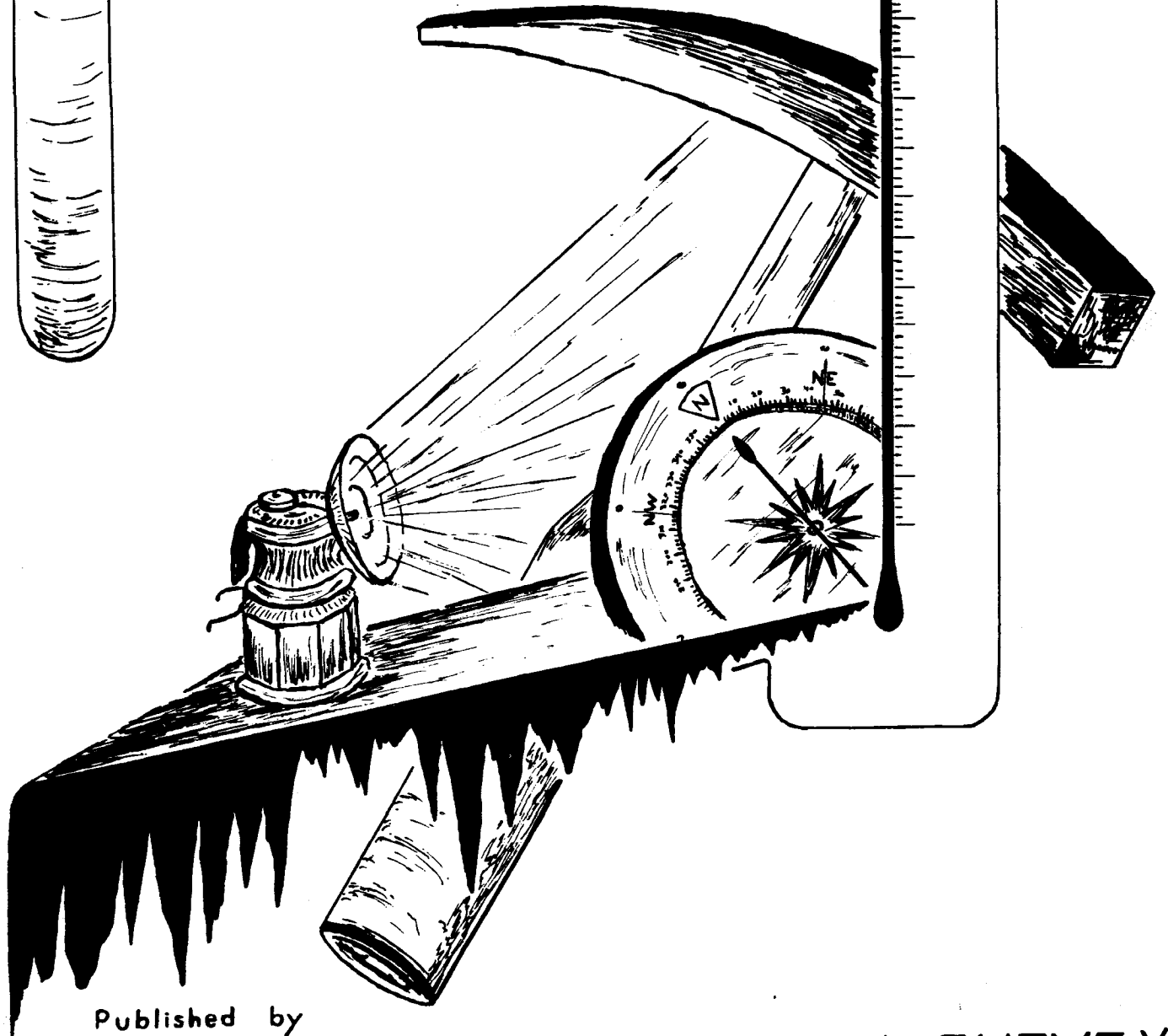
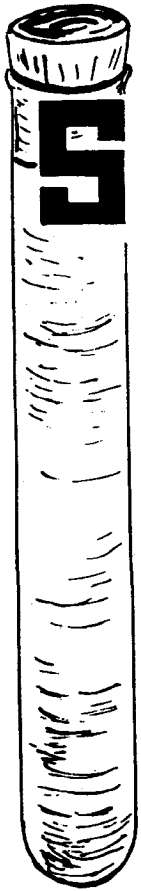


Volume 1

Number 1

MISSOURI SPELEOLOGY



Published by
THE MISSOURI SPELEOLOGICAL SURVEY

MISSOURI SPELEOLOGICAL SURVEY

DIRECTORS

Dr. Oscar Hawksley, Warrensburg
Frank Dahlgren, St. Louis
Jerry Vineyard, Dixon

EDITORIAL STAFF

Editor--Ruth G. Deike
Editorial Advisors:
 Geology--George H. Deike
 Biology--Dr. Oscar Hawksley
Staff Artist--Dwight Weaver
Draftsmen:
 Frank Dahlgren
 Jack Reynolds
 Jerry Vineyard
 Robert Girard

COOPERATING AGENCIES

State of Missouri Geological Survey and Water Resources

Missouri Chapters of the National Speleological Society

Independent Speleological Organizations

MISSOURI SPELEOLOGY

published quarterly by the

MISSOURI SPELEOLOGICAL SURVEY

VOLUME I

JANUARY, 1959

NUMBER 1

CONTENTS

INTRODUCTION TO MISSOURI SPELEOLOGY-----	1
A PRELIMINARY STUDY OF THE ECOLOGY OF SOME BENTON COUNTY CAVES, by Jack Reynolds -----	3
BARRY COUNTY -----	8
Chimney Cave -----	8
Onyx Cave -----	8
Radium Cave -----	10
BENTON COUNTY -----	11
Booger Allen Cave -----	11
Cole Camp Cave -----	11
Craft Cave -----	12
Drennon Cave -----	12
Flippen Cave -----	12
Knobby Creek Cave -----	14
Elisha ('Lish') Estes Cave -----	14
Leugenbiel Cave -----	15
Robber's Cave -----	15
Spring Cave -----	17
Whiskey Cave -----	17

ILLUSTRATIONS

Index Map Showing Locations of Barry and Benton Counties and their Caves -----	9
COLE CAMP CAVE, BENTON COUNTY, MAP -----	13
CRAFT CAVE, BENTON COUNTY, MAP -----	13
FLIPPEN CAVE, BENTON COUNTY, MAP -----	14
ROBBER'S CAVE, BENTON COUNTY, MAP -----	19
WHISKEY CAVE, BENTON COUNTY, MAP -----	21

Second Printing, June, 1965

Subscription \$2.00 per year, single copy 60¢ .

Printing Office: Warrensburg, Missouri

Address communications to: Missouri Speleology, Ruth G. Deike, Editor,
Route #5, Columbia, Missouri

INTRODUCTION TO MISSOURI SPELEOLOGY

Missouri is a big state, and there are some 800 known caves scattered under its entire area. At last count there were perhaps only as many as 50 people actively surveying, exploring, and studying Missouri's caves. This is about 16 caves per person, and more new caves are being found almost daily.

To speed progress on the task of surveying and studying these caves is the purpose of this journal. It will thus provide a continuous permanent record of work finished by the Missouri Speleological Survey, as well as up-to-date reports on newly discovered caves that need to be checked, explored, and reported.

MISSOURI SPELEOLOGY is not the first published record of Missouri's caves. In 1956, *CAVES OF MISSOURI*, by J Harlen Bretz, was published by the Missouri Geological Survey. Bretz lists 538 caves, and describes close to 100 in detail. With few exceptions, however, the maps which appear in the book suffer from incompleteness and lack of detail, as very little mapping had been done in the state at that time. A year later the Missouri Geological Survey published the *CATALOGUE OF THE CAVES OF MISSOURI*, compiled by Jerry Vineyard and others. It listed the 686 caves known in the state by 1957, which included nearly 150 caves newly located since Bretz' book. The information provided by the Catalogue includes the cave name, location, and entrance dimensions.

CAVES OF MISSOURI, will be referred to in the following pages as, "Bretz (1956,)" and the *CATALOGUE OF MISSOURI CAVES* will be references, "Vineyard, et. al. (1957.)"

The completed maps and descriptions appearing in *MISSOURI SPELEOLOGY* will serve as a well earned reward to those who have accomplished the exploring, mapping, and drafting. Speleo-geological, -biological and -meteorological studies, both in Missouri and over the country, will benefit by having convenient access to many maps and reports which would otherwise have taken weeks to accumulate. From time to time, completed studies will appear such as the Benton County ecology study included in this issue.

So that cavers will become familiar with the status of progress in the large cave systems of the state, summary reports of exploration and surveying also will be included. Maps of the larger systems generally will not be published until they are considered complete.

Once in a while, the location and perhaps even map of a particular cave will not be printed. Sad experience has taught that not all cavers can be trusted to observe proper care of Nature's underground handiwork. Broken and muddied formations, beer and food cans, paper litter, and ugly unburied carbide dumps attest to the slovenliness of a few misguided people. For the locations of such special caves one should contact the Grotto of the NSS nearest him.

MISSOURI SPELEOLOGY

The publication staff sincerely hopes that the material appearing in the forthcoming issues of MISSOURI SPELEOLOGY will not be used to the detriment of Missouri's already badly ravished caves.

For their help in the planning and preparation of the material for this new journal, a vote of thanks is due: Dr. Oscar Hawksley, for overall guidance, and editing of biological material; Dwight Weaver, whose talented pen produced the cover design; Jerry Vineyard who, even though Uncle Sam kept him confined to the Mediterranean, was able to contribute wise and helpful suggestions. To Jerry also is due a great deal of credit for the Catalogue which along with CAVES OF MISSOURI, has provided the basic information around which the state cave survey has developed, and finally we are indebted to Jerry for the development of the excellent standards maintained in drafting cave maps for the Missouri Speleological Survey; George H. Deike, for a great deal of sober council; Jack Reynolds for many hours over a drafting table; and credit also is directed toward countless others to whose efforts this journal is dedicated.

Work accomplished on and for MISSOURI SPELEOLOGY has by no means been all on the individual level. The journal staff is indebted to the groups listed below and their respective publications; first for publizing the need for support, and second for redoubling their efforts to produce great quantities of newly finished data. Detailed descriptions of the many field trips necessary to secure the material published in MISSOURI SPELEOLOGY will be found in these publications: Mid-Mississippi Valley Grotto, St. Louis--THE UNDERGROUND; Western Missouri Grotto, Warrensburg--LIAISON; Mid-Missouri Speleologists, Jefferson City--MMS NEWS NOTES; Little Dixie Speleologists, Columbia--FORESIGHT; and the School of Mines Spelunkers, Rolla.

The Editorial Staff

A PRELIMINARY STUDY OF THE ECOLOGY OF SOME BENTON COUNTY CAVES

by Jack Reynolds

Introduction

This study was carried out during the months of March, April, and May, 1958. Eight caves were visited, seven of which were located in the area around the Deer Creek arm of Lake of the Ozarks. The remaining cave is in the area of Cole Camp Creek arm of the Lake. In general physical characteristics, the caves were very much alike, the water temperature being 13° C., and the air temperature 14° C. These temperatures did not vary more than half a degree either way during the study. The pH was 7.8 in all the caves except Flippen Cave which had a pH of 8.0.

Booger Allen Cave (see cave report p. 11)

Booger Allen Cave enters the side of a ridge about thirty feet above the water level of the Deer Creek arm of Lake of the Ozarks. The cave is large for about forty feet, then begins to narrow and finally develops into a stoopway. At the point where it starts to get narrow, there is some breakdown that almost closes the passage. The first sign of a stream channel is beyond this breakdown, although the stream is dry except for a few isolated pools. Spongework and phreatic mud indicate that the cave is phreatic in origin. However, as base levels were lowered, the cave was exposed to the vadose action of the stream and was eroded in some places.

Pack rats, Neotoma floridana, were very numerous and active in this cave. They were found among the jumbled rock and debris covering the floor in the twilight zone. They have built large nests among the rocks out of twigs and sticks which they bring in from outside. Numerous dung heaps were found at various points around these nests. There were no bats or bat guano in the cave when I visited it. Raccoon, Procyon lotor, and opossum, Didelphis virginiana scats, found in most Benton County caves, were absent in Booger Allen Cave. Without these scats, or a stream, it is obvious that the cave has very little food for the smaller cave organisms. The pack rat scats seem to be the primary source of food in the cave, and these do not seem to attract scatophagous organisms as well as the scats of raccoon or opossum which are larger and do not dry out as fast.

A millipede, Abaceon creolum, was found on a rock in the area with the pack rat nests.

Both pigmented and depigmented species of spiders were rather abundant in the cave. The depigmented species were more numerous. I believe the main source of food for the depigmented spiders is the small fly found in so many Missouri caves. The pigmented spiders generally live close to the entrance so that some of their food would consist of outside organisms that wander into the cave.

There were no adult beetles found in the cave. The absence of beetles is probably due to the absence of bat and larger mammal scats.

The several snails (Zonitoides arboreus) found in this cave probably act as scavengers.

Cole Camp Cave (see cave report p. 11, and map p. 13)

The cave mouth is on the west bluff of Cole Camp Creek about thirty feet above the creek and seventy feet below the road. The bluff is a wooded, irregular cliff on the northeast side of a narrow ridge between Cole Camp Creek and its tributary, Duran Creek. With such evidence as spongework, wallpockets and a ceiling slot along a joint, it is probable that the cave is phreatic in origin, and thus older than the present topography. The traversable length of the cave is estimated as not more than three hundred feet. There is a small, slow-running stream in the cave. This stream emerges at the base of the bluff and flows into Cole Camp Creek.

Larvae of the salamander Eurycea longicauda were quite numerous in the cave, but no adults were found.

A few beetles (Quedius capucinus) were found in decaying pieces of wood, toward the top of the big dripstone half-done at the rear of the cave.

The cave cricket, Ceuthophilus williamsoni, was very numerous. These crickets were found clinging to the walls throughout the cave.

Cole Camp Cave, like Booger Allen, had no bats and very little bat guano. The cave penetrates the ridge in a comparatively straight line, leaving most of it in the twilight zone. This is an additional factor limiting the fauna.

Elisha ('Lish') Estes Cave (see cave report p. 14)

Elish Estes Cave enters the side of a large ridge about twelve feet above the water level of the Deer Creek arm of the Lake of the Ozarks. The mouth of the cave is in a large limestone bluff, and is approximately nine feet wide and fourteen feet high. This cave is phreatic in origin and has some fine examples of spongework and a couple of natural bridges. The stream has eroded the floor near the entrance and a large meander starts off the main passage, in the twilight zone, and opens in the bluff face near the main entrance. In the first part of the cave, the stream is fast and clear. However, in the back region of the cave, it is sluggish with hardly any flow. The stream bed of the sluggish part of the stream consists of mud and large quantities of bat guano. However, no bats were present when I visited the cave. The fast part of the stream flowed over bedrock and contained very little mud or guano. The larvae of the salamander Eurycea longicauda were found in considerable numbers in the sluggish section, but none were found where the stream was swift. Millipedes (Tingupa pallida,) beetles, (Ptomaphagus cavernicola, Agonum reflexus, Atheta sp.) and Collembola (Onychiurus sp., rectospinatus group,) were found scattered in the cave wherever bat guano was present. Amphipods were abundant in the fast-moving part of the stream only. This seems to be due to the fact that the sluggish section in this cave is very muddy and polluted with bat guano, whereas

the fast part of the stream is clear. Amphipods, as a rule, are found in clear, clean water.

A few cave crickets and epigeal spiders (see Flippen Cave, p. 5) were found in the entrance and twilight zones of the cave.

The greater biotic richness of this cave, as compared with nearby Booger Allen Cave, is undoubtedly due to the presence of bat guano and a stream.

Flippen Cave (see cave report p. 12, and map p. 14)

Flippen Cave enters a hillside about twenty feet above a small stream bed. The entrance is fifteen feet wide and seven feet high. The cave remains large for about two hundred and fifty feet, at which point, it forks. The left fork closes down rather rapidly with a series of rimstone pools. The right fork is very narrow with a ceiling height of from four to seven feet. The stream in this fork has cut a narrow, deep canyon with numerous meander niches in the walls. When the stream reaches the forks, it spreads out as it flows toward the entrance.

The larvae of the salamander Eurycea longicauda were very abundant in this stream. Both pigmented and depigmented amphipods of the species Crangonyx forbesi were found in the stream. They were very numerous and probably served as part of the food for Eurycea longicauda.

There were no bats in the cave when I visited it, but there were small amounts of guano evident. Raccoon and opossum scats were very numerous throughout the cave. The beetle, Ptomaphagus cavernicola was found in great quantities on the raccoon scats. Other beetles, (Atheta, sp., Agonum reflexus) and Collembola (Tomocerus flavescens), were also found with these scats.

Cave crickets and pigmented spiders were found in the entrance and twilight zones of the caves. These pigmented spiders have been identified by Dr. W.J. Gertsch of the American Museum of Natural History as, Cicurina cavealis Bishop and Crosby. C. cavealis was also found in both Elisha Estes (see p. 4) and Leugenbiel (see p. 5) Caves. C. cavealis, says Dr. Gertsch, may not be, "...a true cave spider in spite of its name. I anticipate that it will occur quite generally outside of caves in Missouri. Species of this genus frequently enter caves, but are not in any way restricted to them, with the exception of one blind species from Texas which I assume is so restricted."

Leugenbiel Cave (see cave report, p. 15)

Leugenbiel Cave enters the side of a hill just a few feet above an abandoned road. The entrance is five feet high and eight feet wide. Twenty feet back, the cave becomes a crawlway and just beyond this the ceiling rises to approximately eight feet. From there on, the cave retains this height, is approximately a foot and a half wide, and is very crooked due to meanders cut by the stream. This narrow passage leads into a round, jug-shaped dome about twelve feet high. Another narrow passage leads off from the opposite side of this dome.

A millipede (Abaceon sp., probably creolum) was found in the twilight zone. A large pool of water covered most of the floor, but it produced nothing in the way of fauna. A second pool was found on a ledge five feet above the floor. This pool, twenty-four inches long and fifteen inches wide, averaged a little less than an inch in depth. On April 20, 1958, this small pool contained thirty-five freshly hatched, and three still unhatched larvae of Eurycea longicauda. The clear, jelly-like eggs measured six millimeters in diameter. The larvae were clearly visible in the eggs, most of which were attached to a small, irregularly shaped stone, about two inches long, in the middle of the pool. Some of the eggs were attached to other debris on the bottom of the pool. The newly hatched larvae were 15 mm. long. I returned to the cave one week later to find the eggs and larvae undisturbed and present in the same numbers. The larvae had grown another 5 mm. The water in this pool was a little colder (11° C.) than that in the stream (13° C.). The pH of both the pool and the stream was 7.8.

The spider Eidmannella (Nesticus) pallida Emerton was found in Leugenbiel and identified by Dr. Gertsch in addition to C. cavealis as mentioned above. About E. pallida Dr. Gertsch writes, that similar to C. cavealis this species is, ".....not to be thought of as an exclusive inhabitant of caves. Eidmannella pallida occurs in caves from Virginia to Panama and sometimes shows rather profound changes as a result of this existence. However, it also occurs outside of caves under ground detritus."

Smaller cave organisms were absent from this cave, apparently due to the absence of various animal scats.

Robber's Cave (see cave report p. 15, and map)

The entrance of Robber's Cave is in a small limestone bluff at the edge of the water on the Osage arm of Lake of the Ozarks. The entrance is approximately seven feet high and twelve feet wide. Fifty feet back, the cave is reduced to a stoopway for 75 feet over a series of rimstone pools, then it opens up and forks. The two forks are about five feet above the floor of the main passage, and a stream issues from each.

Larvae of Eurycea longicauda were very numerous in all parts of the cave. Amphipods were also abundant throughout the cave. There was no bat guano nor any raccoon or opossum scats found. The Lake of the Ozarks backs up into the cave in high water and deposits a great amount of driftwood in the entrance and twilight zones. The lack of animal scats and the fact that the driftwood is close to the entrance would explain why there was no small cave fauna found.

Spring Cave (see cave report p. 17)

The cave entrance is located about six feet up on the side of a large limestone bluff. The entrance is six feet high and six feet wide. A stream flows out of the cave and falls to the base of the bluff. Most of the cave is a crawlway following the stream around its many meanders.

There were no bats or bat guano in the cave. However, raccoon and opossum scats were very numerous. Millipedes, probably Tingupa pallida, were found on some of these scats. Beetles (Ptomaphagus cavernicola and Atheta sp.) were found to be quite abundant on the scats also. A few snails (Mesodon inflectus) were found.

Whiskey Cave (see cave report p. 17, and map)

Whiskey Cave has a sinkhole entrance near the bottom of a ravine. The cave consists of one room about thirty feet high. A small stream enters the room from under the wall. It flows down the edge of the room for a few feet and disappears under the wall again.

Several amphipods were found in the stream, but no salamanders were present. The only other fauna in the cave were six bats (Myotis grisescens) hanging from the ceiling.

Acknowledgements

I wish to express my appreciation to Dr. Nell B. Causey, Dr. Thomas C. Barr, Jr., and Leslie Hubricht for their identifications of some of the cave organisms collected during this study.

Thanks are also extended to Dr. Oscar Hawksley and Roy Drennen for information on the locations of the caves in Benton County.

Literature Consulted

Bretz, J.H., Caves of Missouri: Missouri Geol. Survey and Water Resources, 2d ser., vol. 39, Rolla, Mo., 1956.

7927 James A. Reed Rd.,
Kansas City, 33, Mo.

BARRY COUNTY

Barry County lies on the western flank of the Ozark Dome in a region of gently dipping to flat-lying sediments. The caves located so far in the county are developed in the Mississippian, probably Osage Group of massive cherty limestones, or the Ordovician, Beekmantown Group of massive cherty dolostones. Some caves may be developed at the unconformable contact between the Beekmantown and Osage Groups, but no field work has been done.

To date, 18 caves are known in the county. Bretz (1956) describes three caves, one of which is commercialized, and lists 10 others. None of these are completely mapped.

Vineyard, et. al., (1957) lists two caves in addition to those listed by Bretz; and two new caves have been reported since then.

New Information on Barry County Caves

CHIMNEY CAVE (Barry-18)*

Shell Knob Quad.
New Cave**

This cave is located in the bluff on the NE side of the deep ravine running SE from the Lohmer Fire Tower. It is well known locally. The entrance is reported to be a squeeze with the cave apparently opening up to a good size. It is reported that there are bats in the cave.

O. Hawksley, 1/28/58

ONYX CAVE (Barry-15)

Cassville Quad.
New Cave

This cave, located at Onyx Cave Picnic Grounds, has been partly developed by the U.S. Forest Service. It is not supervised. The three foot diameter opening leads to a small well-decorated two-level cave. Another entrance which connects to the main cave, involves a 40' drop. A very small passage from the bottom of this sinkhole entrance may lead to extensions of the cave.

O. Hawksley, 3/6/54

* (Barry-18) is an accession number. In order to avoid confusion due to name synonymy, the caves of each county are numbered chronologically in order of discovery and accurate location.

** New Cave, refers to the fact that the cave has not previously been listed in either CAVES OF MISSOURI or the CATALOGUE OF MO. CAVES.

**FIG. 1- Index map showing locations of
Barry (1) and Benton (2) Counties**

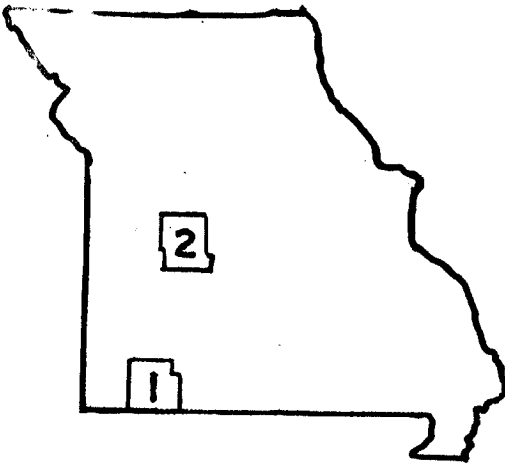


FIG. 2- BARRY COUNTY

**Caves mentioned in text
labeled with their
accession numbers.*
(see p. 8.)**

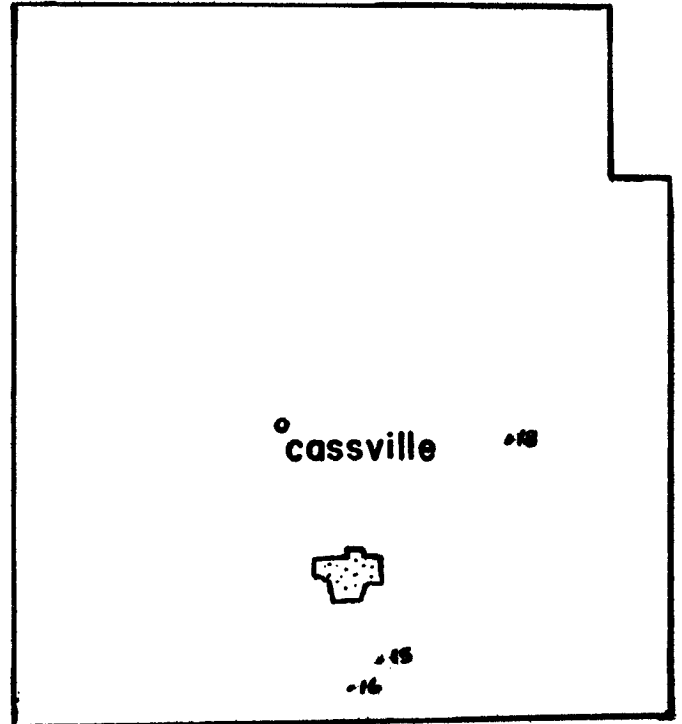
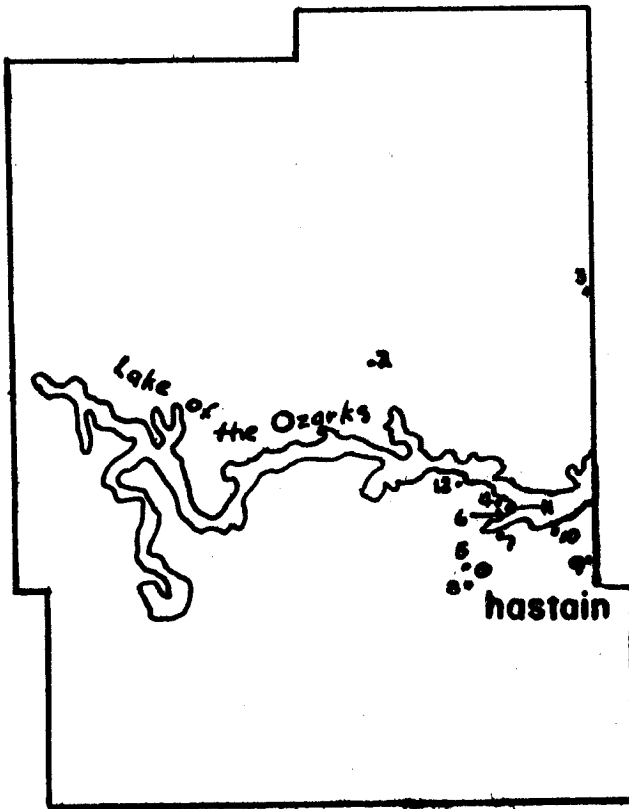


FIG. 3- BENTON COUNTY

**Caves mentioned in text
labeled with their
accession numbers.
(see pp. 12-21)**

*** See footnote, page 8**

RADIUM CAVE (Barry-16)

Cassville Quad.
New Cave

Radium Cave is reported to include a 200' crawlway and an intermittent stream. The floor of the cave is Chattanooga shale.*

Dr. Scharon,
Washington University,
St. Louis, Mo.

* The relationship of the Chattanooga shale to the beds in which the cave is developed would prove an interesting problem for future investigation. The cave development has probably been affected by the insoluble, impervious shale strata. The Chattanooga is Middle (?) and Upper Devonian, Hass (1956), and is probably overlain here by the Mississippian Osage Group.

Hass, W. H., 1956, Age and Correlation of the Chattanooga shale and the Maury formation: U.S. Geological Survey Prof. Paper 286.

Benton County lies near the northwestern extremity of the Ozark Dome in a region where Cambrian, Ordovician, and Mississippian rocks outcrop. Because of its distance from the central portion of the dome, the area is one of low regional dip.

The caves of the county are developed, for the most part, in the Gasconade formation of Lower Ordovician. This is a massive, cherty dolostone. The caves are of the single passage or "dendritic" forked-passage type. Some criteria of phreatic development (ceiling pockets, spongework) remain, although there has been strong modification by subsequent stream erosion. The resulting passage patterns display broad meanders and eroded wall niches. There appears to be some joint control of the passage patterns, especially in Robber's Cave, but generally the caves are too small to show much joint determination.

In Benton County there are 11 caves known to date. Bretz (1956) describes one cave in detail (see Cole Camp Cave, below) and lists one other. Vineyard, et. al., (1957), lists one additional cave. Since the catalogue, 8 new caves have been located.

New Information on Benton County Caves

BOOGER ALLEN CAVE (Benton-6)

Edwards 7 1/2' Quad.
New Cave

Booger Allen is located on the right bank of the Deer Creek arm of Lake of the Ozarks. The entrance is 23'W x 7'H and is 25-30' above lake level.

The cave closes down after 60' to a low stoop-way. It is generally a single-passage cave modified by an upper level and some dry cut-offs. It may extend for several hundred feet.

For a description of the ecology of this cave, see pp. 3-4.

O. Hawksley, 10/47/57

COLE CAMP CAVE (Benton -2)

Lakeview Heights Quad. (shown on)
Bretz (1956), Vineyard, et. al. (1957)

An adequate description of Cole Camp Cave is found on page 278, Bretz (1956.)
See map.

CRAFT CAVE (Benton-3)

Boyer's Mill 7 1/2 Quad.
Vineyard et. al. (1957)

OWNER: Zeno Craft, Route #2, Stover, Mo.

To reach Craft Cave, take the highway east from Stover and turn south on county road toward Boyer's Mill and Spring. Turn right on private farm or wood road about 0.5 mile N. of the Boyer's Mill spring-fed lake. The cave is 0.8 mile up this road past an old abandoned dwelling where cars may be left.

The cave entrance is a few feet above the level of the intermittent stream bed and is about 12 x 14'. The passage quickly dwindles to a crawl. About 120' back there is a room 15' in diameter. The cave continues from this room as a crawlway too small for a man to enter. The crawlway shows signs of use by foxes or other small mammals. The floor of the cave is dry clay.

The cave was first explored in 1954, and in the Fall of 1956 Mr. Craft reported that he had extended the cave another 40' or so by digging out the clay fill, and could see more passage beyond. He may be planning to use the cave for storage or shelter for stock.

See map, page 13.

O. Hawksley, 1/13/57

DRENNON CAVE (Benton-5)

Edwards 7 1/2' Quad.
New Cave

This cave is located in a small bluff facing Deer Creek. Its total length is not over 100'. There are other solution openings in the bluff close to it. The owner, Mr. Drennon, has recovered some artifacts from the cave.

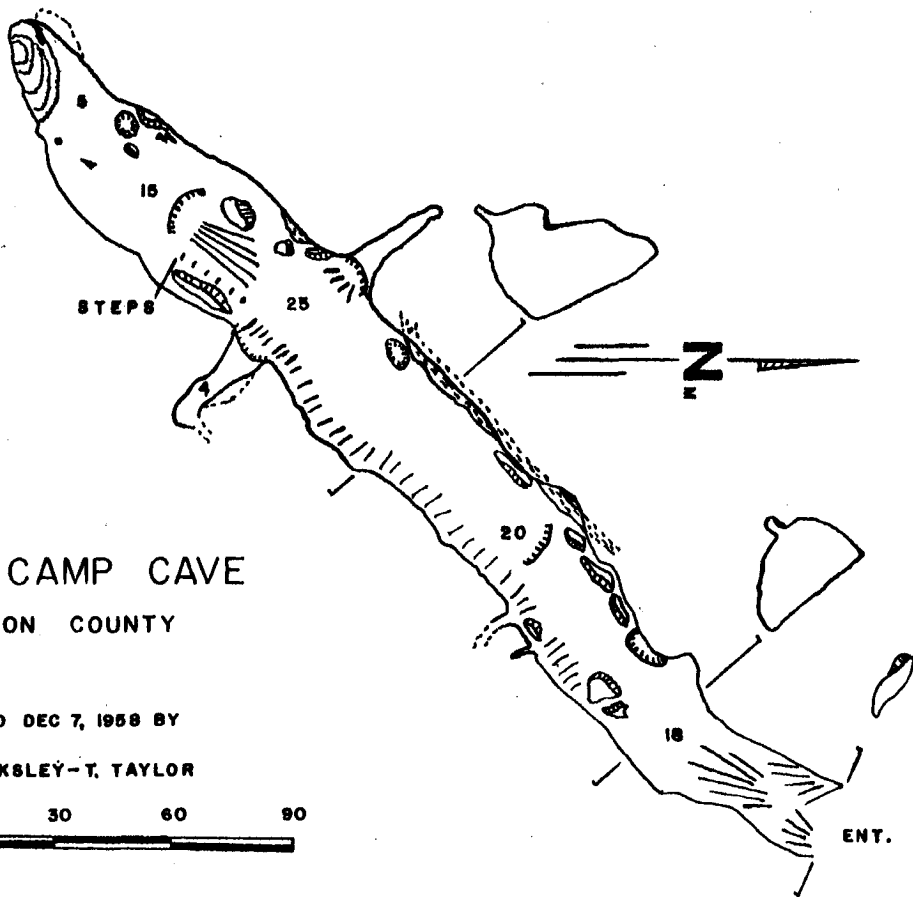
O. Hawksley, G. Deike, 10/27/57

FLIPPEN CAVE (Benton-9)

Knobby Creek Quad
New Cave

The entrance to Flippen is about 700' from the road in an indentation in the hill on the S. side of a brook. Trees along the brook obscure the entrance even in winter.

The entrance is 14'H x 22'W. The entrance room is also about this size, rather dry even though lower than the entrance, and has an extension or side chamber to the right. In times past, many Indian artifacts have been taken from this room, according to local stories. This should be checked with Roy Drennon at Hastain, Mo., as he is the local amateur archaeologist.

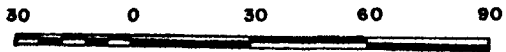


COLE CAMP CAVE

BENTON COUNTY

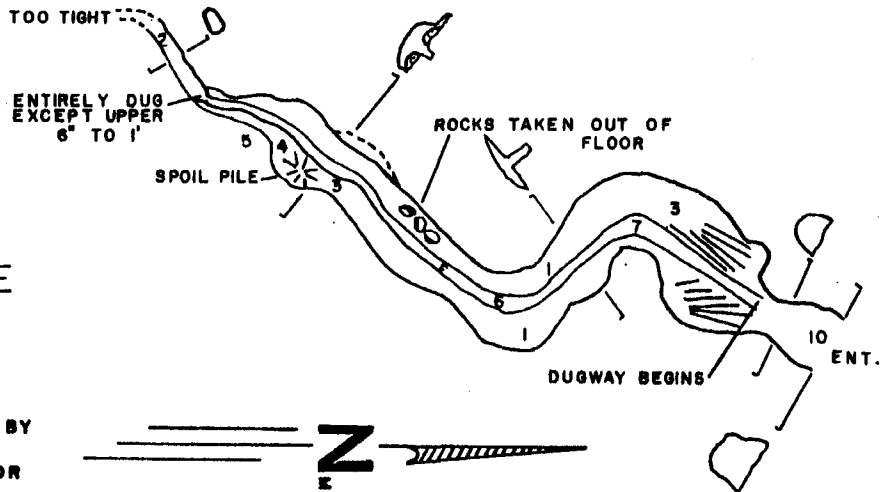
SURVEYED DEC 7, 1958 BY

O. HAWKSLEY-T. TAYLOR



CRAFT CAVE
BENTON COUNTY

SURVEYED DEC. 7, 1958 BY
O. HAWKSLEY-T. TAYLOR



100' from the entrance, there are a couple of broad meanders and then narrower passage to a fair sized room with a niche to the right. Here, the main passage turns abruptly left in a horseshoe bend, but a low (3') wide passage directly ahead cuts through to the main passage again, leaving the meander to the left. As might be expected, this meander has a floor higher than the cutoff, and it contains the only large breakdown block in the cave. Just beyond the cutoff, and 269' from the entrance, a side passage turns left.

The floor of the side passage, covered with a series of rimstone dams, rises gradually until the passage is only 18" high and was surveyed no further.

The main passage continues about 150' where it narrows from 12' to 18" due to flowstone on the left. From here on, there are several groups of formations until 526' from the entrance, formations completely block the passage. At this point the cave has both upper and lower leads which are too small to enter without enlargement. Here there is some water in the lower level although most of the cave is dry and clean.

The cave is about as extensive as any yet discovered in Benton County and is apparently very popular with the local people.

It is said that a section of the new county highway nearby kept sinking. This was attributed to Flippen Cave; however this would demand a considerable extension of the known cave.

See map, page 14.

O. Hawksley, 12/8/57

KNOBBY CREEK CAVE (Benton-10)

Knobby Creek Quad
New Cave

This cave is located well up on the hillside just N. of a group of cabins on the E. side of Knobby Creek cover of the Lake of the Ozarks.

The entrance is quite large and can be seen easily from a boat out on the cover. It is described locally as being smaller than Flippen. It is unexplored.

O. Hawksley, 12/8/57

ELISHA ('LISH') ESTES CAVE (Benton-4)

Edwards 7 1/2' Quad.
New Cave

Elisha ('Lish') Estes Cave is best reached by boat from either Forthview or Duckworth Camps near Hastain, Mo. Its large entrance is located in the bluff several feet from lake

level on the Deer Creek Arm of Lake of the Ozarks .

Just inside the entrance are several small upper level passages, but generally the cave is a single stream passage, explored some 400' but said to extend considerably farther. A small stream flows out of the cave and occupies most of the floor.

Bat guano is distributed thru most of the cave. Fauna in the cave include, salamanders, amphipods, carabid beetles, flies, gnats, tiny hoppers, white and pigmented millipedes, and spiders. (See "A Preliminary Study of the Ecology of Some Benton County Caves.")

LEUGENBIEL CAVE (Benton-8)

Edwards 7 1/2" Quad.
New Cave

The cave is located on the W. side of Deer Creek, one mile S. of Hastain, Mo. An old road which parallels the creek may be followed to it.

Leugenbiel is a rather small cave, but a local resident insists that it does back quite a distance.

See "A Preliminary Study of the Ecology of Some Benton County Caves," J. Reynolds, p. 5.

O. Hawksley, 12/19/58

ROBBER'S CAVE (Benton-11)

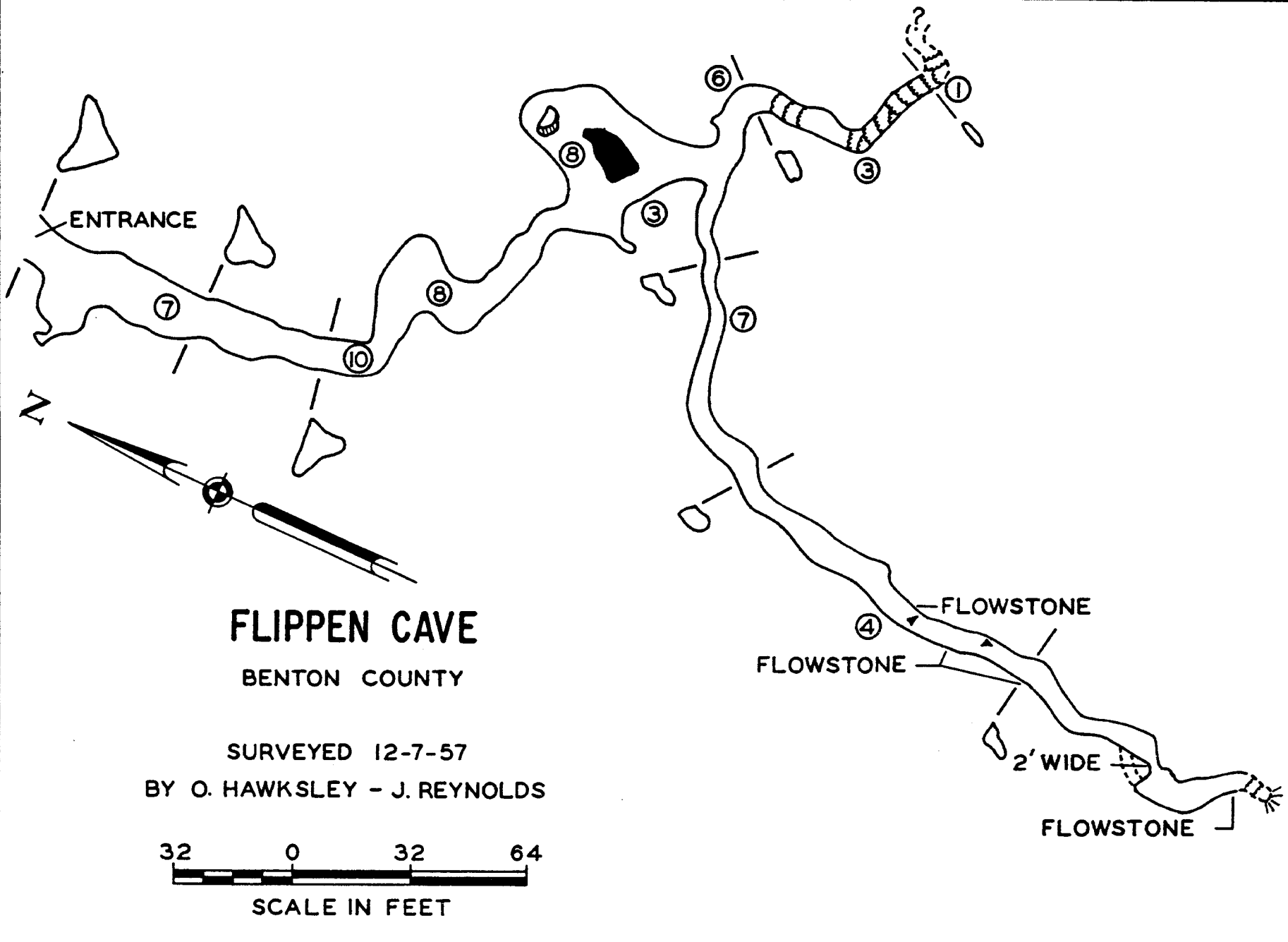
Edwards 7 1/2" Quad.
New Cave

Robber's cave seems to be fairly well known locally and was thought to connect with "Lish" Estes Cave on the other side of the peninsula and about 3500' away. This is doubtful.

The cave is located on the Lake shore about 0.6 mi. SE of Duroc Bay, but is difficult to find. Mr. Roy Drennon of Hastain (nearest village) knows the cave well.

The entrance which is about 15'W x 9'H, is found at the base of a small bluff. It is on the SE side of a small cove or indentation in the shoreline which causes driftwood to accumulate around and in the entrance in times of high water.

About 50' from the entrance, one must crawl over a "rimstone" flow which covers the entire floor and has built up until there is only about 2' of headroom. Another 50' further on, the passage becomes higher as one reaches a fairly deep pool and a natural bridge just beyond. Following the natural bridge there is a rimstone dam, which is 7' high.



ENTRANCE

FLIPPEN CAVE

BENTON COUNTY

SURVEYED 12-7-57

BY O. HAWKSLEY - J. REYNOLDS



SCALE IN FEET

N

④

FLOWSTONE

FLOWSTONE

2' WIDE

FLOWSTONE

⑥

①

③

⑧

③

⑦

⑧

⑩

⑦

This dam is only a few inches thick for its entire height and has broken out at the bottom, allowing water to flow through it. At one time the dam must have backed rather deep water into the cave and prevented much vadose erosion of the main passage.

Back of the rimstone dam, the passage divides. The fork to the right ends about 80' back where it is closed by flowstone and formations. The left, or main passage, continues 100' to a flowstone half-dome which has been formed by mineral laden water brought in by a streamlet coming in from the right. The half-dome nearly blocks the passage, but a slim person can squirm over into the water which is dammed up behind it on the left. There the passage continues with ceiling heights of 6-8' but the caver sinks to his arm pits in thigh-deep silt under a couple of feet of water, held back by the half-dome. The cave could continue for some distance. It is doubtful however, that it connects with 'Lish' Estes Cave on the other side of the ridge and at least 3500' distant, although some local people claim that it does.

See map, page 19.

O. Hawksley, 12/19/58

SPRING CAVE (Benton-7)

Edwards 7 1/2' Quad.
New Cave

Spring cave is located on the R. bank of the Deer Creek arm of the Lake of the Ozarks, about 0.5 mi. NE of Duckworth Camp. It can be readily seen from a boat as an obvious hole about 6' above the base of the bluff.

Back about 25' from the 9'H x 8'W entrance, the cave forks, each fork having been explored for about 150' and reported to continue. It is said that at times a fair-sized stream of water comes out of the cave.

O. Hawksley, G. Deike, 10/27/57

WHISKEY CAVE (Benton-12)

Edwards 7 1/2' Quad.
New Cave

This cave is locally well known and there seem to be numerous stories about its use as a still.

The cave is located at the head of the ravine which leads up from the cove at the SE end of Duroc Bay. From the village of Hastain, take the road to Duroc Bay and around it to the SE. It is easiest to go on up the road to the shoulder of the hill and then follow the contour around to the head of the ravine.

The entrance is a fenced-off sinkhole about 10' in diameter. One can scramble down 20' to a steep clay slope but a rope attached to a tree at the entrance makes descent easier.

About half way down the descent, after squeezing through a tight spot one then emerges into the main room of the cave. This is a roughly oval room with a domed ceiling. As one enters, there is a talus slope leading down to a stream on the right; a smaller and lower room directly in front; and on the left is a ledge connecting with this lower room.

The stream was dry on December 14, 1958, but had been running in early spring when visited by Jack Reynolds. The stream was of a typical vadose type--winding, with very sharp edges on the stream-cut rock. Most of the channel was too small to be explored. This stream must have been handy when the cave was used as a whiskey still, because the used mash could have been poured into it to be disposed of, thus attracting no attention outside.

The ceiling of the main room has an obvious joint running its length (at right angles to the entrance slope) and appears to be under the small surface sink above the entrance.

There is evidence of the cave being used by raccoons. Cave crickets and a single Pipistrelle bat were also found, but not much else in the way of fauna.

See map.

O. Hawksley, 12/19/58

MATERIAL IN PRESS FOR FORTHCOMING ISSUES

BOONE COUNTY

At Least Eight Maps and Reports

Geology of Ralphord's Cave, by Ruth G. Deike, et. al.

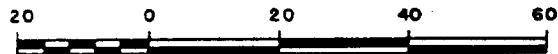
History and Folklore of Boone County Caves, by Dwight Weaver

ROBBER'S CAVE

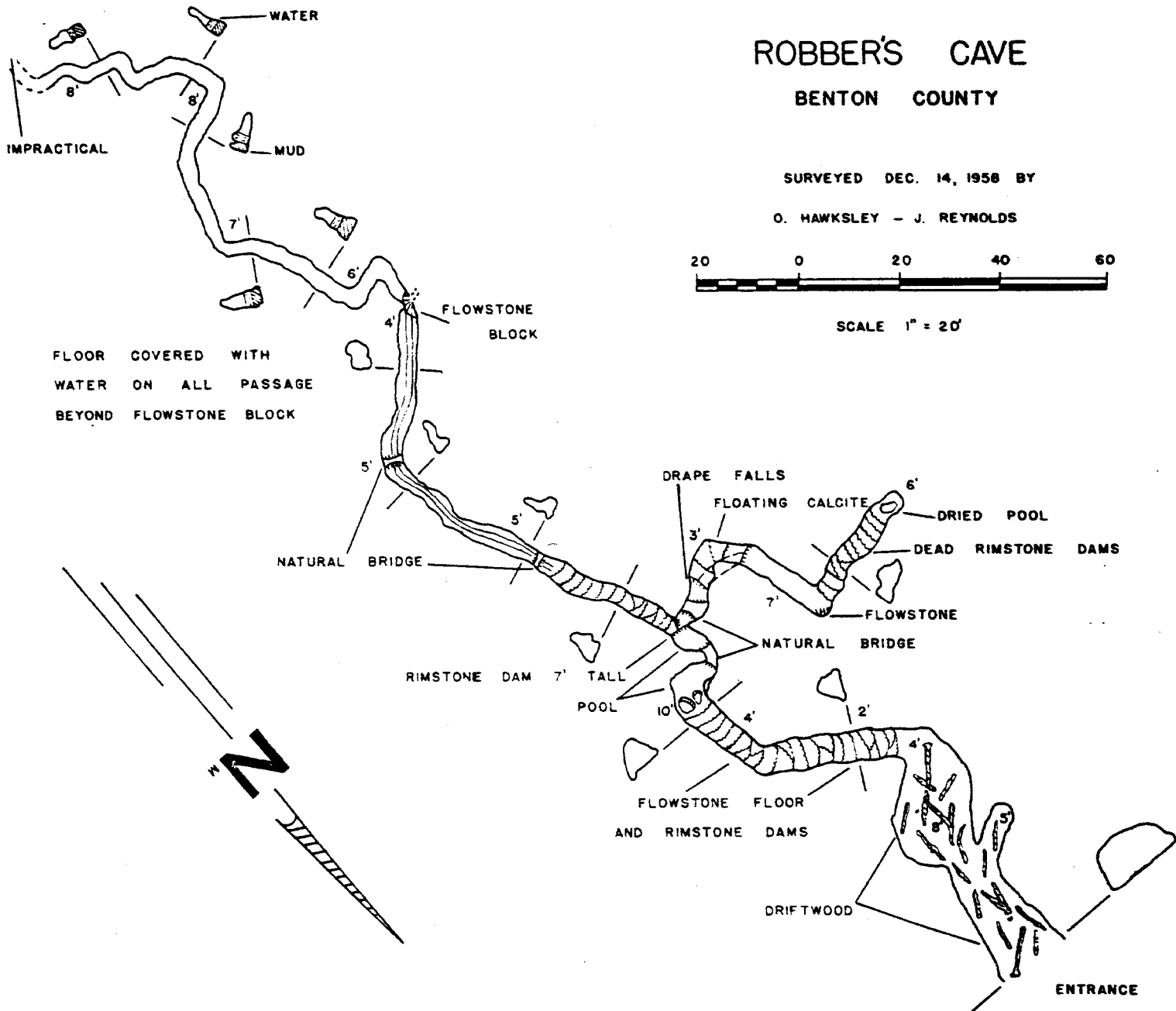
BENTON COUNTY

SURVEYED DEC. 14, 1958 BY

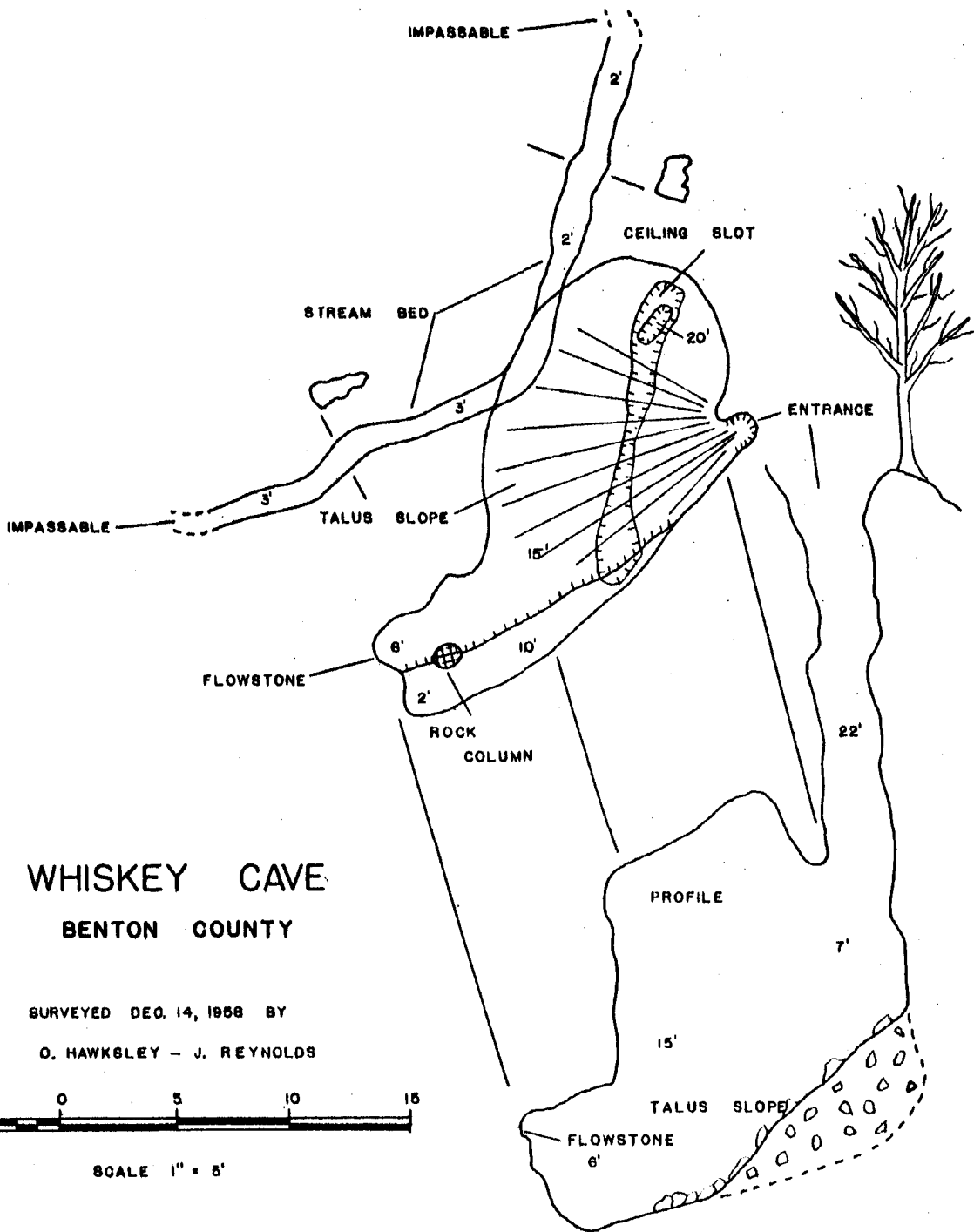
O. HAWKSLEY - J. REYNOLDS



SCALE 1" = 20'

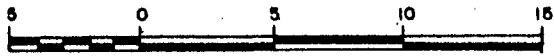


FLOOR COVERED WITH
WATER ON ALL PASSAGE
BEYOND FLOWSTONE BLOCK



WHISKEY CAVE
BENTON COUNTY

SURVEYED DEC. 14, 1958 BY
 O. HAWKSLEY - J. REYNOLDS



SCALE 1" = 5'

