

THE MOST IMPORTANT CAVES AND POTHOLES OF GREECE*

by

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The purpose of this paper is to give in short, general characteristics of the caves and potholes in Greece according to the specifications of the International Union of Speleology.

We put together data based on these specifications for each cave or potholes.

Name, position, geological formation, interior decoration, first scientific research, name of the researcher(s) and literature.

We will describe caves longer than 1000 m. and potholes deeper than 100 m.

Two tables have been prepared where all the available data is mentioned.

On the included map of Greece caves and potholes are pointed at the exact position.

A. C A V E S

1) Cave Perama — Ioannina

The cave is situated at the North end of the Ioannina lake, in Cretaceous limestone.

The entrance is large, however, after a few meter becomes narrow

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caused by stalactites and stalagmites. The known length is 1700 m. comprising except corridors and small rooms.

It is considered one of the most important caves in Greece because of the abundance and variety of shapes of the stalactites and stalagmites.

The existence of the cave is known from the last century.

The first scientific research was done in 1951 by a team of S. S. G. under Mr. I. Petrochilos.

From 1951 to 1963 more research groups under I. and A. Petrochilos went into the cave and according to them, it was formed by carstification of the existing joints and fractures on the limestone, with a general strike NE-SW, NW-SE and E-W.

LITERATURE :

PETROCHILOS, A. 1951.—Cavèrne de Perama à Ioannina. *Bull. Soc. Spéleol. Grèce*, I, 5, p. 262 - 264, Athènes.

PETROCHILOS, I. 1955 - 56.—Cavèrne de Perama à Ioannina. *Bull. Soc. Spéleol. Grèce*, III, 5/6, p. 117 - 132, Athènes.

COMPTE RENDUES DU IV COLLOQUE INTERNATIONALE DE SPÉLÉOLOGIE, 1963, édit. 1965.

2) Cave «Limnes» Castria Kalavryta

The cave is situated near the village Kastria (Kalavryta) on the east side of the Helmos (Aroania) mountain at 800 m. above sealevel.

The length is 2000 m. During the winter it functions as an underground river and the rest of the year, water remains in 13 graduated level lakes.

The cave can be distinguished in the 3 parts :

A: Dry part: length 330 m.

B: Main part with lakes: length 520 m.

C: Dry part: length 1100 m.

The entrance has the following dimensions $6,5 \times 2,5$ m.

The cave is formed in Upper Cretaceous-Eocene limestone of the series Holonos-Pindos.

The exploration was done in 1966 by a team of S. S. G. with A. Petrochilos, I. Ioannou, E. Confalik, Ota Ondroucek, M. Kala.

LITERATURE :

PETROCHILOS, A. 1974.—La grotte («Ton Limnon» No 3479. *Bull. Soc. Spéleol. Grèce*, XII, 6/7, p. 217 - 222, Athènes.

PETROCHILOS, A. 1976.— Etude pour la protection de la grotte et ses eaux par la pollution, région de Kastriion de Kalavryta en Achaïe grotte «les lacs». *Bull. Soc. Spéléol. Grèce*, **XIII**, 6/7/8, p.188-192, Athènes.

3) « Vlychada » Diros Cave.

This cave is situated at the South part of the Diros by the town of Areopolis. The entrance is at rocky seashore and till recently the only way to it was by boat.

The dimensions of the entrance are 4×8 m. and is through semi-metamorphic limestones. The main consistence of stalagmites and stalactites is CaCO_3 and only very rarely do we see other substances such as Fe-oxides, Al-oxides.

The variety of stalagmites and stalactites and the existence of a river give to the cave a phantasmagoric sight, and that is why the cave is the only one of its kind in Europe.

Inside the cave we find fossilised Pleistocene fauna.

The cave is 3300 m. long.

The existence of the cave has been known from 1900 but the first publication with a short description was done in 1948 by S. Skopetea. A new exploration took place in 1949 by I. Petrochilos and the more explorations followed until today by different teams of S. S. G. by I. and A. Petrochilos, K. Kylakos, G. Kylakos, P. Katsolis, N. Xenakos.

LITERATURE :

PETROCHILOS, I. 1951.—Cavernes a Mani. *Bull. Soc. Spéléol. Grèce*, **I**, 1, p. 5-13, Athènes.

PETROCHILOS, I. 1957-58.— Recherches Spéléologiques dans la région de Dyros en Laconie. *Bull. Soc. Spéléol. Grèce*, **IV**, 4, p. 57-96, p. 127-148, Athènes.

PETROCHILOS, I. and A. 1961. Découverte d'ossements et cranes d'hommes préhistoriques dans la région de Dyros (Laconie). *Bull. Soc. Spéléol. Grèce*. **VI**, 4, p. 3-9, Athènes.

4) Cave « Kokkines Petres » Petralona Chalkidiki.

The cave is situated 800 m. east of Petralona village at 250 m. above sea level, on the west side of the mountain Katşika inside Cretaceous

limestone. The length of corridors is 1500 m. comprising the main corridor and three branches.

There is a variety of Pleistocenic mammalian fauna and also a skull of *Homo neanderthalensis*.

The first scientific exploration took place in 1959 by I. Petrochilos followed by other explorations in 1962, 1963, 1964 by I. and A. Petrochilos, D. Liagos, I. Apostolides.

The exploration of the cave is still going on because of the great scientific interest focused on the finding of the Neanderthal skull and big mammal fossilised fauna.

LITERATURE :

- KANELLIS, A. - MARINOS, G. 1969. - Die Höhle von Petralona. 41th Speleol. Congress 4 - 5, p. 355 - 392, Ljubljana.
- KOKKOROS P., KANNELIS A. 1960. - Decouverte d'un crâne paleolithique dans la peninsule Chalkidique. *L'Antropologie*, **64**, p. 438 - 486.
- MARINOS, G. - GIANNOULIS, P. - SOTIRIADIS, L. 1965. - Paleoanthropological research in the Petralona cave, Chalkidike. Scientific Yearbook Physical Faculty, Thessaloniki University, **9**, p. 149 - 204, Thessaloniki.
- PETROCHILOS, A. - Decouverte des lits de mammiferes quaternairts dans la Petralona de Chalkidiki par I. Petrochilos. 3rd International Speleological Congress in Vienna, September 1961.
- PETROCHILOS, A. 1962. - La grotte «Kokkinon Petron» (Pieres Rouges) de Petralona (Pcninsule Halkidiki), *Bull. Soc. Spéleol. Grèce*, **VI**, 7/8, p. 1 - 8, Athènes.
- PETROCHILOS, A. 1964. - La grotte de Kokkinon Petron a Petralona de Halkidiki. *Bull. Soc. Spéleol. Grèce*, **VIII**, 6, p. 160 - 167, Athènes.
- PETROCHILOS, I. 1960. - Observations sur les grottes Petralona de la Peninsule (Macedoine) Chalkidiki. *Bull. Soc. Spéleol. Grèce*, **V**, 5/6, p. 140 - 154, Athènes.
- SICKENBERG, O. 1964. - Die Säugetirefauna der Höhle Petralona bei Thessaloniki (vorläufige mitteilung) «Geological and Geophysical Research» of Institute for Geology and Subsurface research, **IX**, 1.

5) Cave «Kykl ops Polifimos» Maronia Komotini.

This cave is situated in the Komotini province 2 km from the village of Maronia at 50 m. above sea level. The length of corridors is 1800 m. and is formed in marble of the Rhodopi zone. The entrance has the shape of a arcade and the dimension are 1,5 × 3,5 m.

The general direction is N-S and expands over 5000 m².

The great number and the variety of shapes of stalagmites and stalactites and also the findings of neolithic, early-elladic and Byzantine civilizations are the causes of the great interest, both scientific and touristic.

K. Avdis in 1896 is the first who explored the cave.

In 1919 a second exploration by a French team.

In 1934 by P. Avdis and in 1969 by a team of S. S. G. by A. Petrochilos, J. Gourvelou, M. Gourvelou.

The legend says that the cave was used by the kyclops Polyphimos.

LITERATURE :

AVDIS, G. 1897.—La grotte de Maronia. *Bull. Soc. Spéol. Grèce*, **IV**, 2/3, p. 19-20, Athènes.

PETROCHILOS, A. 1970.—Grotte « du Kyclope », Maronia Komotini, *Bull. Soc. Spéol. Grèce*, **X**, 5, p. 10-17, Athènes.

6) Cave Alistrati Serres

This cave is situated in the area of the town of Alistrati Serres. The entrance of the cave is at the side of a hill near the Serres-Drama railroad track. The place is called Ambartsiki. It has been opened into marble with silex.

The length of main corridors in an horizontal level is about 1438 m.

However the total length is more than 2500 m. Average height is 5-10 m. with a maximum of 30 m. Average width is 5-10 with a maximum of 20-35 m.

A variety of shapes and a number of stalactites and stalagmites make a rich decoration of the cave.

This cave is one of the most important in Europe.

First exploration in 1976 by a team of Austrians scientists (R. Seeman). On the 1977 a team of the S. S. G. lead by the President of the S. S. G., Professor N. Symeonidis explored this cave and their findings will be published in order to attract touristic interest. The team consisted of N. Symeonidis, E. Tsimbanis, E. Konstantakatos, Gr. Papadopoulos, G. Dilaras.

According to these scientists the Alistrati cave might be connected with a cave which is smaller but of equal interest called Peristeriona with separate entrance.

LITERATURE :

SEEMAN, R. 1977. — Unpublished report on Cave exploration in Serres. Naturhistorisches Museum, Wien.

TABLE 1.

The Caves of Greece with length above 1000 meters.

a/a	Name of the Cave	Village	Area	District	Length in meters
1	Perama	Perama	Ioannina	Epirus	1.700 m
2	Limnes	Kastria	Kalavryta	Pelopones.	2.000 m
3	Vlyhada	Diros	Areopolis	Pelopones.	3.300 m
4	Kokkines Petres	Petralona	Chalkidiki	Macedonia	1.500 m
5	Cave of Kyklops Polifimos	Maronia	Komotini	Thrace	1.800 m
6	Cave Pothole of Tzani Spilios or Honos	Omalos	Chania	Crete	2.900 m
7	Cave Alistrati	Alistrati	Serres	Macedonia	2.500 m

II. P O T H O L E S

POTHOLES OF PINDOS AREA

1) Pothole «Provatina».

The main pothole of the Pindos area. The known depth is 400 m. Near by the village Papington it is opened through Cretaceous limestone of the Olonos- Pindos serie.

A team of speleologists from England - Australia (A. Pavey, J. M. James, N. R. Montgomery, S. Perry, R. Churcher) has done the first scientific exploration and more are planned.

2) Pothole «Pandremeni Gynaika».

The depth is 270 m. In the area of the Astraka plateau (Pindos) where according to information there are more potholes such as:

3) Pothole «Olyssis».

The known depth is 150 m.

4) Pothole «Anonymon».

The known depth is 100 m.

LITERATURE :

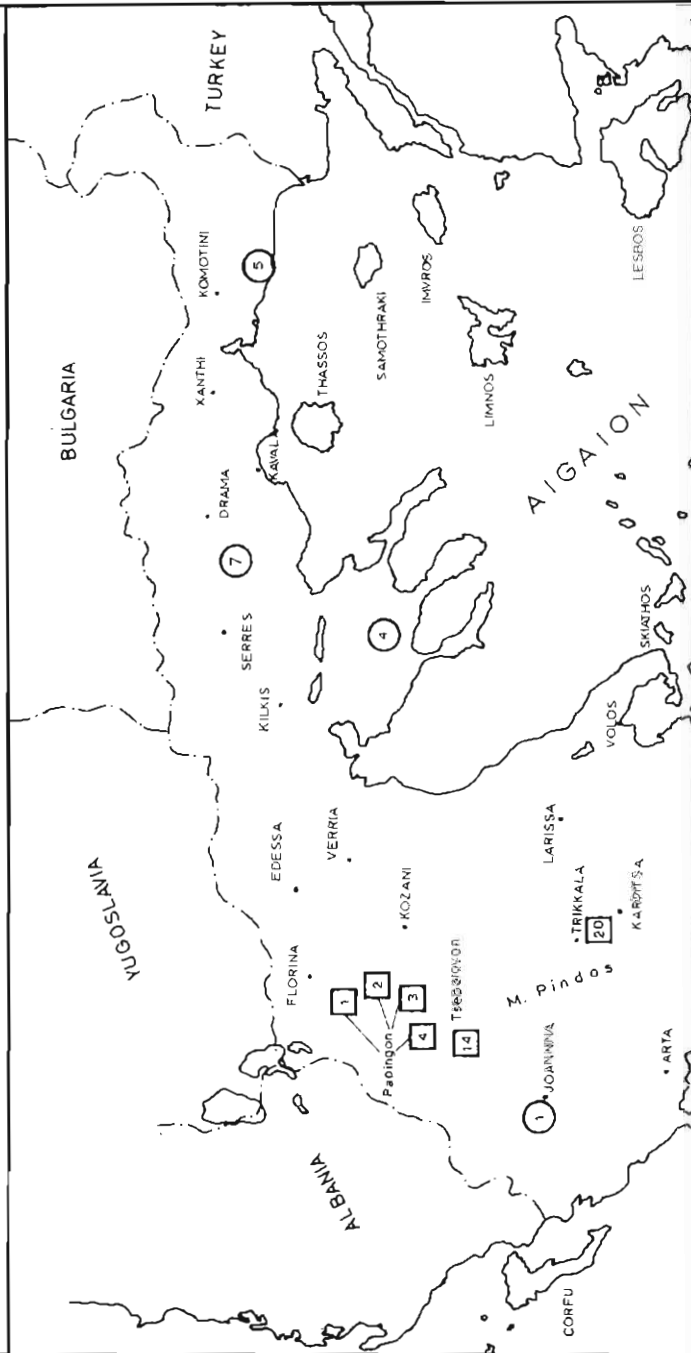
PETROCHILOS, A. 1976. — Research in Pindos. *Bull. Soc. Spéléol. Grèce*, **XIII**, 6/7/8, p. 236 - 237, Athènes.

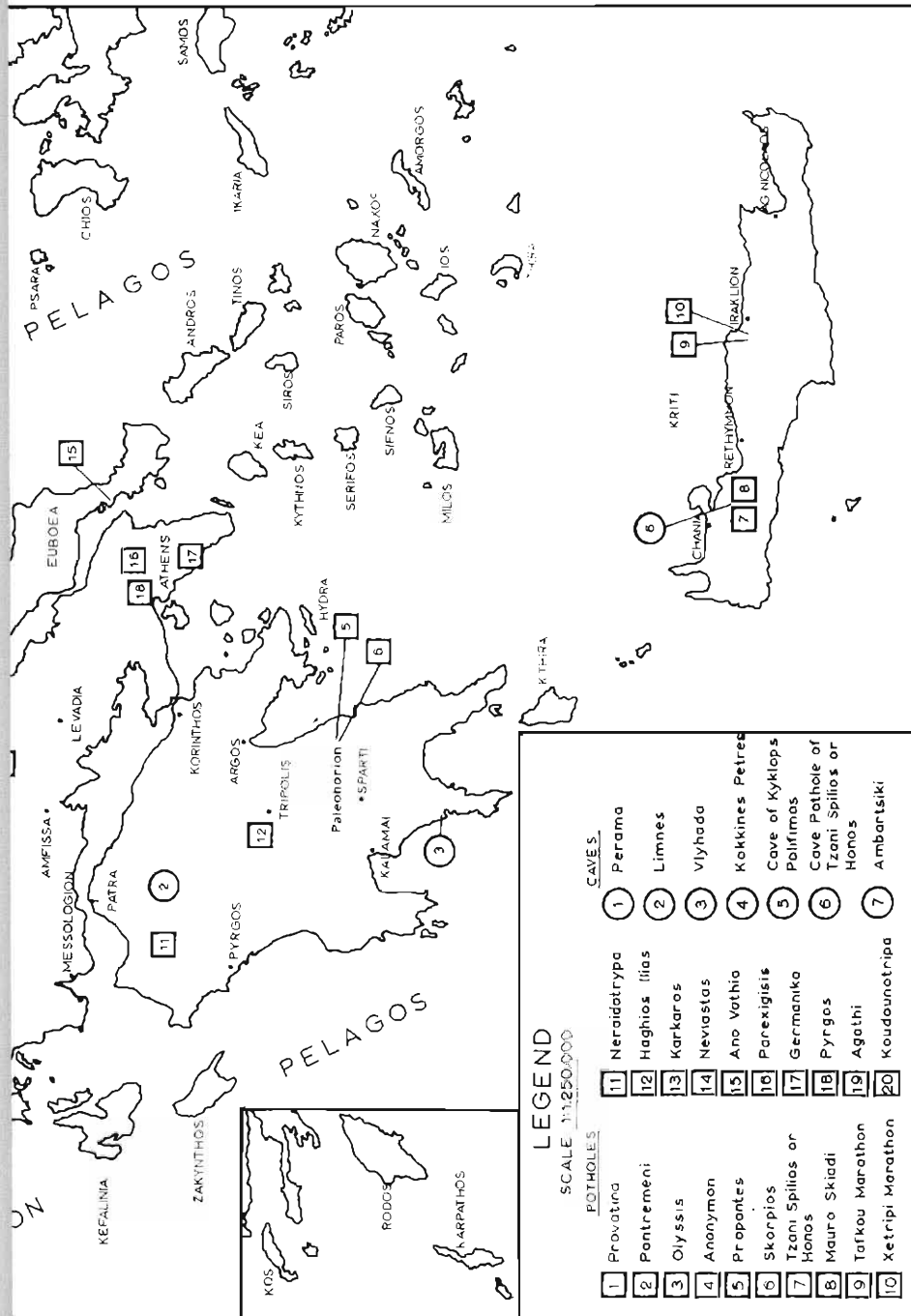
Provatina Cave research group of Great Britain.

MAP OF GREECE WITH THE MOST IMPORTANT CAVES AND POTHOLES

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21. Eftastomou 22. Hagios Mathaeos

5) Pothole « Propantes » Palaeochorion —
Leonidion Arkadia.

In the area of the village Palaeochorion at the province Leonidion of Arkadia district has been formed in Eocene limestone. The known depth is 418 m. The exploration was done in 1974 by a team of S.S.G. (C. Traiforos, E. Tsimbanis, D. Alfieris, I. Ioannou, J. Stroumbou, S. Karapanayotidou, A. Varveri, J. Mikros, B. Tsimbanis, E. Konstantakatos, T. Solopoulos) and a French team as well (G. M. Relin, G. Relin, S. Garin, R. Gautier). More explorations are planned.

LITERATURE :

Gouffre « Propantes ». *Bull. Soc. Spéléol. Grèce*, **XIII**, 6/7/8, p. 218-219, Athènes 1976.

6) Pothole « Skorpion » Profitis Elias Leonidion.

At a distance of 200 m. from the Prof. Elias church near Leonidion. Formed in Eocene limestone. Twin entrance: the first has dimensions 0,50 × 0,50 m. and the second 1 × 2,50 m.

The depths are 208 m. for the first and 92 m. for the second.

Exploration in 1973 by a team of S. S. C. (I. Ioannou, A. Petrochilos, D. Liagos, A. Bergin, J. Ioannou, G. Dilaras, I. Vamvakas, D. Alfieris) and a French team as well (J. M. Relin, D. Jurbe, P. Guillemot, B. Motrot, S. Garin, G. Rerin, J. Mignot, R. Gautier).

LITERATURE :

IOANNOU, I. 1974.— Le gouffre « Scorpion » de Prophète Elie à Leonidion. *Bull. Soc. Spéléol. Grèce*, **XII**, 6/7, p. 188-195, Athènes.

7) Cave - pothole « Tzani Spilios » or « Chonos »
Omalos Chania.

Situated on the NE side of the Omalou Chania plateau at 1040 m. above sea level, inside limestone.

The length is 2900 m. and the graduated depth 290 m.

First exploration in 1961 by a team of the «Mountaineering Society

Chania». Second in 1964 by members of the French «Maison de Jeunes. et de la culture Romaine (Drome)».

Third in 1975 by a team of S. S. G. (A. Petrochilos, E. Pavlidis) a team of the «Speleo-club de la Seine» (Paris - France) and a team of the Speleo club de l' Université (Tours - France).

LITERATURE :

PETROCHILOS, A. 1976. — Recherchés Spéléologiques en ile Crète I. Gouffre «Tzani - tripa», *Bull. Soc. Spéleol. Grèce*, **XIII**, 6/7/8, p. 222 - 228, Athènes.

8) Pothole «Mavro Skiadi» Apokoronou - Chania.

This pothole is situated at the North side of the Haghion Pneuma hill on the Lefka Mountain at 2000 m. above sea level.

The known depth is 360 m.

Exploration by a French team of B. Michaut, R. Marion, J.P. Beau, V. Descramps, A. Dennoux, I. Quinqueton, G. Millian (from «Generation Francaise de Speleologie, Paris»).

LITERATURE :

PETROCHILOS, A. 1976. — Gouffre «Mavro Skiadi» de la région Apokoronou en Crète. *Bull. Soc. Spéleol. Grèce*, **XIII**, 6/7/8, p. 228 - 229, Athènes.

9) Pothole «Tafkou» Marathon Malevizion, Heraklion Crete.

It is formed in semi-metamorphosed limestone. During the first exploration in 1968 the measured depth was 150 m. The new exploration in 1974, carried out by a French team (G. Relin, G. M. Relin, S. Carin, R. Cautier, B. Balivet) and a team of S. S. G. as well (L. Chatzilazaridis, B. Tsimbanis, S. Kolovouris, I. Ioannou) gave a new depth measurement of 73 m. Probably between 1968 and 1974 the bottom of the pothole was partially filled up.

LITERATURE :

IOANNOU, I. 1976. — Grotte - gouffre «Toù lakkou ó tafkos» près du village Marathos de Malévizion en Crète. *Bull. Soc. Spéleol. Grèce*, **XIII**, 6, 7/8, p. 229 - 232, Athènes.

10) Pothole «Xetripi» Marathon Malevizion, Crete.

During the first exploration in 1958 the measured depth was 100 m. The new exploration in 1974, carried out by a team of S. S. G. (A. Petrochilos, E. Platakis, S. Kolovouris, L. Chatzilazaridis, B. Tsimbanis, I. Ioannou) and a French team as well (G. M. Relin, G. Relin, R. Gautier, S. Garin, B. Balivet) gave a new depth measurement of 50 m. Probably the bottom of the pothole was partially filled up between 1968 and 1974.

LITERATURE :

IOANNOU, I. 1976.—Crotte-gouffre «Xetripi tou tafkou» près du village Marathos de Malévision en Crète. *Bull. Soc. Spéleol. Grèce*, **XIII**, 6, 7, 8, p. 233-216, Athènes,

11) Pothole «Neraidotrypa» Portes-Patra Achaia.

known depth is 200 m.

12) Pothole «Haghios Elias» Hellinitsa Arkadia.

known depth is 150 m.

13) Pothole «Karkaros» Lilaea Pthiotis.

The known depth is 100 m.

14) Pothole «Neviasta» Tsepelovo-Tsournotades-Ioannina.

The known depth is 100 m.

15) Pothole «Ano Vathia» Amarynthos Euboea.

It is situated in the area of Aglefaros, east of the St. Nikolas Ano Vathia monastery. The known depth is 110 m. First exploration in 1974 by a team of S.S.G. (D. Liagos, L. Chatzilazaridis).

LITERATURE :

IOANNOU, I. 1976.—Trois gouffres de la région Amarynthos de l'île Eubée. *Bull. Soc. Spéleol. Grèce*, **XIII**, 4-5, p. 124-127, Athènes.

16) Pothole « Parexigisis » Stavros Hymyttus Attica.

It is situated at the Mavrovouni, to south end of Hymyttus at 480 m. above sea level.

The known depth is 115 m. formed through joints N-NE in the Hymyttus lower marble. It was discovered in 1935 and explored in 1946.

LITERATURE:

PETROCHILOS, I. 1955-56.— *Megalo varathro Mavrovouni « Parexigisis »*. *Bull. Soc. Spéleol. Grèce*, **III**, 1, p. 49, Athènes,

17) Pothole «Germanika» Vouliagmeni Attica.

The known depth is 100 m.

18) Pothole «Pyrgos» Hymyttus Ilioupolis Attica.

Inside the Hymyttus lower marble with a known depth of 139 m.

19) Pothole «Agathi» Chalkiopoulos, Aetoloakarnania.

The known depth is 190 m. First exploration in 1959 by a team of S.S.G. (I. and A. Petrochilos, L. Geromitsos, L. Petrochilos).

20) Pothole «Koudounotrypa» Pyli, Trikala.

The known depth is 120 m. First exploration in 1963 by a team of S.S.G. (I. Ioannou, I. Iglesias, A. Kanellis).

21) Pothole «Eftastomon», Parnassos.

It is situated near the village Ano Agoriani (Eftalofos) at 1200 m. above sea level. The depth is 117 m. and it has been formed in Cretaceous limestone. The first 90 m. the pothole's temperature is on the freezing point and it consists of thick grained snow, that looks like a glacier «nevé». The stalactites found at the beginning of the pothole consist of glassice.

The existence of the pothole has been known since 1939 by G. Delis. A new exploration took place in 1950 by I. and A. Petrochilos, I. Ni-

kolopoulos, S. Lekkas, S. Konstantinou, A. Pagalos, M. Levis, A. Stefanopoulos, G. Kapakoglou, J. Mystakidis.

LITERATURE :

PETROCHILOS, I. 1951. — Eftastomo de Parnasse. *Bull. Soc. Spéleol. Grèce*, I, p. 29-42, Athènes.

22) Pothole « Haghios Matthaeos », Corfu.

It is situated on the mountain of Corfu Haghios Matthaeos. We haven't more information about this pothole, except those given by A. Rangavis (1854, p. 669), who wrote that the known depth is 250 m. The S.S.G. plans to explore this pothole in the future.

LITERATURE :

RANGAVIS. A. 1854. — *Hellinika*, 3, p. 669.

Π Ε Ρ Ι Λ Η Ψ Ι Σ

Ἡ παροῦσα ἐργασία σκοπὸν ἔχει νὰ δώσῃ ἐν συντομίᾳ τὰ γενικὰ χαρακτηριστικὰ τῶν σπήλαιων καὶ τῶν βάραθρων τῆς Ἑλλάδος συμφώνως πρὸς τὰς προδιαγραφὰς τῆς Διεθνοῦς Σπηλαιολογικῆς Ἐνώσεως

Οὕτω ἐπὶ τῇ βάσει τῶν προδιαγραφῶν αὐτῶν συνελέξαμεν στοιχεῖα δι' ἕκαστον σπήλαιον ἢ βάραθρον ἥτοι τὴν ὀνομασίαν, τὴν γεωγραφικὴν θέσιν, τὸν γεωλογικὸν σχηματισμὸν, τὸν ἐσωτερικὸν διάκοσμον, τὴν πρώτην ἐπιστημονικὴν ἐξερεύνησιν, τοὺς ἐξερευνητὰς καὶ τὴν βιβλιογραφίαν.

Κατωτέρω περιεγράφησαν τὰ σπήλαια, τὰ ὁποῖα ἔχουν μῆκος μεγαλύτερον τῶν 1000 μέτρων καὶ τὰ βάραθρα τὰ ὁποῖα ἔχουν βάθος μεγαλύτερον τῶν 100 μέτρων.

Ἐπίσης κατεσκευάσθησαν δύο πίνακες εἰς τοὺς ὁποίους ἀναφέρονται τὰ ἐν λόγῳ στοιχεῖα διὰ τὰ σπήλαια καὶ τὰ βάραθρα. Τέλος εἰς τὸν ἐπισυναπτόμενον χάρτην τῆς Ἑλλάδος ἐτοποθετήθησαν τὰ περιγραφόμενα σπήλαια καὶ βάραθρα εἰς τὴν ἀκριβῆ γεωγραφικὴν θέσιν εἰς τὴν ὁποίαν εὐρίσκονται.

TABLE 2.

The potholes of Greece with depth more than 100 meters.

a/a	Name of the pothole	Village	Area	District	Depth in meters as today known
1	Provatina	Papingon	Pindos	Epirus	400
2	Pantremeni	Astraea	Pindos	Epirus	270
3	Olyssis	Astraea	Pindos	Epirus	150
4	Anonymon	Astraea	Pindos	Epirus	100
5	Propantes	Paleohorion	Leonidion	Arkadia	418
6	Skopios	Profitis Ilias	Leonidion	Arkadia	208,92
7	Tzani Spilios or Honos	Omalos	Chania	Crete	290
8	Mauro Skiadi	Apokoronos	Chania	Crete	360
9	Tafkou Marathon	Malevision	Heraklion	Crete	150
10	Xetripi Marathon	Malevision	Heraklion	Crete	100
11	Neraïdotrypa	Portes	Patras	Achaia	200
12	Haghios Ilias	Hellinitsa	Ariopolis	Arcadia	150
13	Karkaros	Lilaea	Pthiotis	Ster.Hellas	100
14	Neviasias	Tsepelovo	Ioannina	Epirus	100
15	Ano Vathia	Vathia	Amarynthos	Euboea	110
16	Parexigisis	Stavros	Hymyttus	Attica	115
17	Germanika	Vouliagmeni	Athens	Attica	100
18	Pyrgos	Ilioupolis	Hymyttus	Attica	139
19	Agathi	Chalkiopoulos	Aetoloakarnania	Sterea Hellas	190
20	Koudounotrypa	Pyli	Trikala	Thessalia	120
21	Eftastomon	Agoriani	Parnassos	Phokis	117
22	Haghios Matthaeos	Matthaeos	Corfu	Ionian	250