# CUEVA DE PETRÓLEA, A NEW BRANCH OF CUEVA DEL VIENTO SYSTEM: SURVEY AND FAUNA

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## INTRODUCTION

Cueva del Viento is a name formerly used for a single tube (also known as Cueva Breveritas) but nowadays applied to a complex system of interconnected lava tubes situated in El Amparo (Icod de los Vinos, Tenerife). In the highest part of this system is Cueva del Sobrado,one of the most interesting sections as much for its geomorphology as for its state of conservation status. The lowest entrance of this cave is at 800 m a.s.l. consisting of a 12 m deep volcanic pit connecting the shallower Cueva del Sobrado, and the deeper Cueva Intuición. Inside the pit and at 8 m below the surface a lateral lava tube starts called Cueva de Petrólea. Both this small branch and the main one continuing from the bottom of the pit (Cueva Intuición) were discovered in May 1994 during the excavations carried out by the Cabildo de Tenerife, after removing many tons of stones thrown into the pit some 80 years ago. The survey and some considerations on the origin of Cueva Petrólea, as well as a faunistic study of this small branch are presented here.

## METHODOLOGY

The cave was surveyed following the U.N.E. norms for cartographic representations (Hoyo, 1985). According to these and following the criteria used by Martín (1988) to standardize surveys for a Canarian catalogue, the survey has a squared compartment at bottom right with all data concerning speleometry, authors, etc. Interesting transversal sections of the cave are also represented.

We used a calibrated compass and clinometer, and an semirigid metric tape measure. According to the survey precision scale proposed by the Cave Research Group of Great Britain and accepted by the U.I.S., this survey corresponds to a V level precision.

For sampling cave-dwelling animals we used a combined system of visual searching and pitfall traps, the latter with Turquin liquid, and cheese or liver as solid baits. The traps were set for a fortnight.

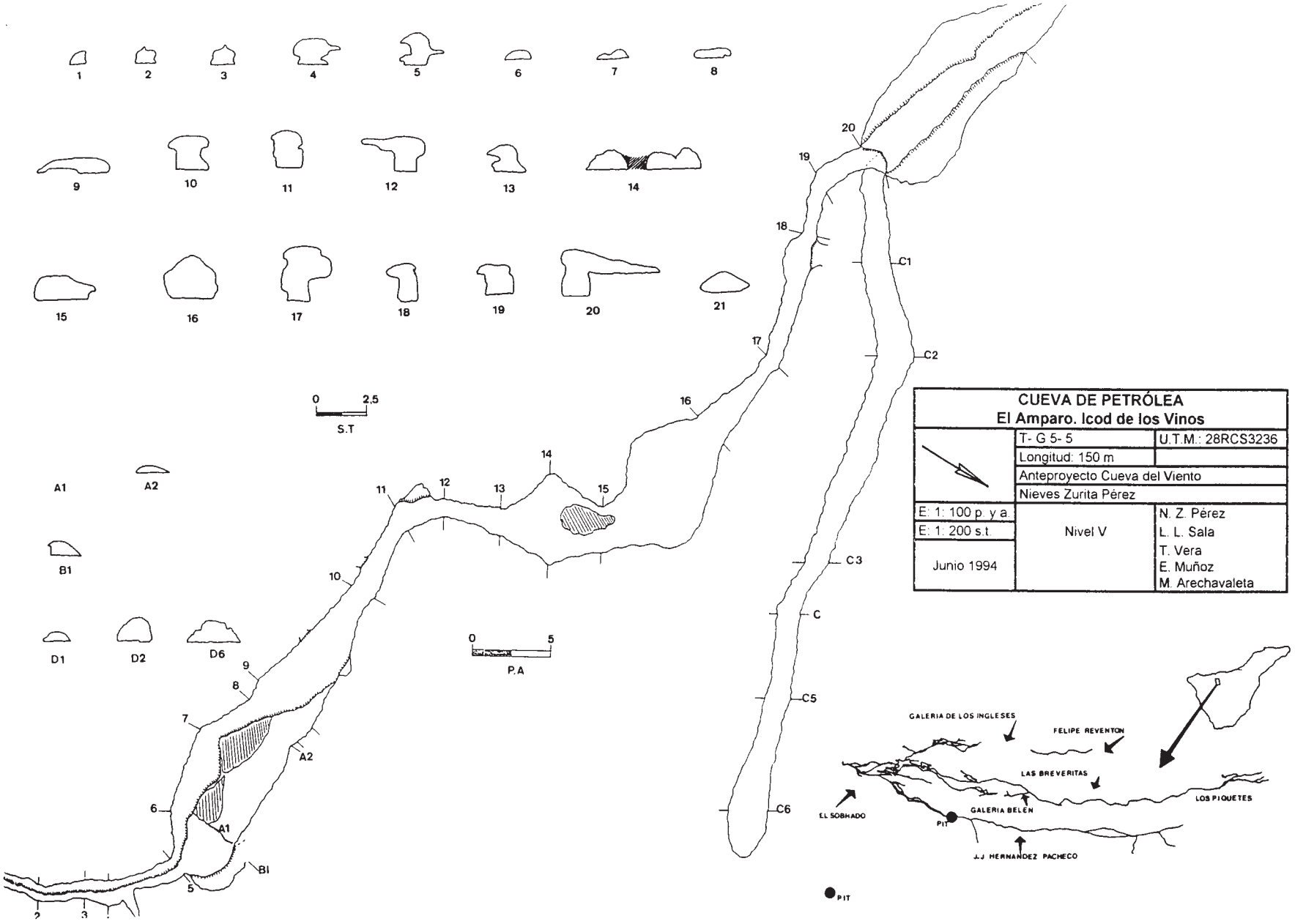
## RESULTS

According to the MONTORIOL-POUS classification (1973), Cueva Petrólea is a syngenetic, rheogenetic, subterranean cave. It is 105 m long excepting the lateral, secondary branches. The largest part of the tube is 4.50 m wide and up to 2.68 m high. Lateral benches resulting from different lava levels are present all along the cave. There is also a variety of speleothems and mineral concretions. The floor is mostly rocky although in particular spots some soil has accumulated. In spite of being a small cave, it is rather complex. There are abundant ramifications, and the slope is quite steep, continuously ascending away from the entrance.

Among the 21 animal species collected, 8 are troglobites (38% of total) (Table. I). This represents a high proportion compared with results obtained from former studies ( Martín, 1992; Martín et al., 1995) carried out in different sectors of the Cueva del Viento system. This richness may be explained by the abundance of roots and accumulated soil, and also good conservation of the environment - Cueva Petrólea was discovered in April 1994 and has remained closed to visitors until now.

Table I. Species collected in Cueva Petrólea.

| SPECIES | ADAPTATION |
|---|---|
| GASTROPODA | |
| F. Zonitidae | |
| *Oxychilus* sp. | Troglophile |
| ISOPODA | |
| F. Armadillididae | |
| *Eluma purpurascens* Budde-Lund | Troglophile |
| F. Armadillidae | |
| *Venezillo tenerifensis* Dalens | Troglobite |
| DIPLOPA | |
| F. Iulidae | |
| *Ommatoiulus moreleti* (Lucas) | Trogloxene |
| *Dolichoiulus* sp. | Troglobite |
| F. Blaniulidae | |
| *Blaniulus guttulatus* (Bosc) | Troglophile |
| SYMPHYLA | |
| Gen sp. indet. | Trogloxene |
| COLLEMBOLA | |
| F. Entomobryidae | |
| Gen. sp. indet. | Unknown |
| BLATTARIA | |
| F. Blattellidae | |
| *Loboptera subterranea* Martín y Oromí | Troglobite |
| *Loboptera troglobia* Izquierdo y Martín | Troglobite |
| HOMOPTERA | |
| F. Cixiidae | |
| *Tachycixius lavatubus* Remane y Hoch | Troglobite |
| *Tachycixius* af. *crypticus* Hoch & Asche | Unknown |
| COLEOPTERA | |
| F. Carabidae | |
| *Wolltinerfia martini* (Machado) | Troglobite |
| *Spelaeovulcania canariensis* Machado | Troglobite |
| F. Staphylinidae | |
| *Apteranopsis* n.sp. | Troglobite |
| *Tachyporus* sp. | Trogloxene |
| F. Curculionidae | |
| *Laparocerus* sp. | Trogloxene |
| LEPIDOPTERA | |
| F. Noctuidae | |
| *Schrankia costaestrigalis* Stph. | Troglophile |
| DIPTERA | |
| F. Phoridae | |
| *Megaselia* sp. | Troglophile |
| F. Calliphoridae | |
| *Calliphora vicina* Rob.-Desv | Trogloxene |
| F. Trichoceridae | |
| Gen sp. indet. | Trogloxene |




**CUEVA DE PETRÓLEA**
**El Amparo. Icod de los Vinos**

| | | |
|---|---|---|
| | T- G 5- 5 | U.T.M.: 28RCS3236 |
| | Longitud: 150 m | |
| | Anteproyecto Cueva del Viento | |
| | Nieves Zurita Pérez | |
| E: 1: 100 p. y a. | Nivel V | N. Z. Pérez |
| E: 1: 200 s.t. | | L. L. Sala |
| Junio 1994 | | T. Vera |
| | | E. Muñoz |
| | | M. Arechavaleta |

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# APPENDIX

The vulcanospeleology has become a busy activity among local scientific and sportive cavers, and thus the research and exploration of lava tubes and volcanic pits have increased during the last years. Some speleologists had no opportunity to attend the 7th International Symposium of Vulcanospeleology in spite of having their own papers already prepared. Taking advantage of this new chance to make known the works they have carried on, we have considered the possibility to publish the papers concerning to the vulcanospeleology in La Palma, the island where the Symposium took place. Assuming that they were not presented as contributions to the Symposium, these papers are included apart in the present appendix.