

## CONTENTS

## INHALT

## TABLE DE MATIÈRES

## INDICE

## INDICE

## СОДЕРЖАНИЕ

## 1

AUTHORS  
AUTOREN  
AUTEURS  
AUTORI  
AUTORES  
АВТОРЫ

ABRAMOV, I. P. - IVANTCHENKO, V. G.: Speciality of karst and cavern ecology of the Altai (in Russian)	391	BURIN, Kliment - KOLEV, Dimitar - SPASSOV, Konstantin: Experiments in tracing karst underground waters with bromine using neutron activation analysis	130
ANDRAITCHUK, V. - LUKHIN, V.: Large sink in the Ural	666	BÁRÁNY-KEVEI, Ilona: Investigation of karst soil of dolinas in Bükk and Agtelek-Mountains in Hungary	551
ANDRAITCHUK, V. N. - KOVALTCHUK, A. I. - BELOKRYS, I. A.: Cave in siderite	241	CALANDRI, Gilberto: Jordan karst: geomorphologic and hydrogeologic looks	672
ARAKAWA, Tatsuhiko: Dating of Growth Rings and their relation to Late Quaternary climatic changes in the Ryukyu Islands, Japan	39	CALANDRI, Gilberto: The karst in the evaporitic diapires of the Northeast Algeria	671
ARAKAWA, Tatsuhiko - OSHIRO, Naoki - IGAWA, Hiroyuki: The developments of Limestone Ramparts and Limestone Walls in the Ryukyu Islands, Japan	41	CALANDRI, Gilberto: Preliminary note on some karst waters of the Middle-Southro Morocco	671
ARAKAWA, Tatsuhiko - HORI, Nobuyuki - MIURA, Hajime: The ages of one cycle of cave developments in a subtropical Raised Coral Reef Area: Yoron Island, The Ryukyus, Japan	44	CHIKVASHVILY, G. A.: Karst cave microclimate immunocorrection effect (in Russian)	586
ASPARUHOV, Milko: An attempt for elucidation of the medieval drawings - graffiti from North-West Bulgaria (in Russian)	344	CHONKA, J. - SIMIONKA, J. - POTING, D.: Dynamics of microclimate parameters of speleo- therapeutic hospital (in Russian)	416
BACHINSKIY, Georgy: Cave protection and social ecology (in Russian)	449	CHONKA, J.: Clinical affectivity of microclimate treatment of salt mine (in Russian)	419
BALIAN, Sogomon - VANIAN, R. A.: On the usage of the karst cave of Archeri, the first one in Armenia	674	CIGNA, Arrigo A.: Underground water dating by tritium measurements	562
BELTYUKOV, German: The evaluation of the recent karst process activity by hydrochemical methods (in Russian)	376	COCEAN, Pompei: Types of karstic systems in the Apuseni Mountains	686
BERNASCONI, Reno: Thoughts about the hydrobioidea fauna of Hungary	679	CRAVEN, Stephen A.: The Cango Caves of South Africa: has government control been beneficial?	156
BERSENEV, Yuri: Karst and features of speleogenesis in the eastern USSR (in Russian)	388	CSEPREGI, A. - LORBERER, Á.: Computer simulation of the karstwater level changes in the Transdanubian Mountain Ranges	466
BIZUKIN, A. V. - NEMCHENKO, T. A. - USIKOV, D. A.: Research Sneznaja cave	684	CSER, Ferenc: Calculations on the formation of wholes by corrosion	470
BODOLEA, Ana - VIEHMANN, Iosif: The floating calcite from the cave Hoanca Apei (Bihor Mountains - Romania)	655	DE IPIÑA, Jesus Maria LZ. - PINEDO, Roberto: Features and hidrologic running of the karst in Sierra Salvada (Alava, Burgos, Vizcaya, North Spain)	85
BONEV, Kamen I.: Geologic structural control of karst-forming processes in the plateau Guaso, Southeast Cuba	669	DE IPIÑA, Jesus Maria LZ.: Contribution to study of ground-water pollution in the Apodaca Karstic Aquifer (Basque Country, Northern Spain)	88
BOSÁK, Pavel - LYSENKO, Vladimir: The evolution of the Bohemian Karst	688	DEBENATH, André: L'occupation paleolithique du karst de Charente (France)	30
BOSTED, Peter E. - TINSLEY, John C.: Documentation of caves and karst in Redwood Canyon Kings Canyon National Park, California, USA, with applications to sinkhole sedimentation	179	DEMÉK, Jaromír: Periglacial processes in karst regions	656
BOSÁK, Pavel: A key to paleogeography and stratigraphy of continental periods	663	DEREVYANKO, A. - IVLEVA, N. - MARKIN, S.: Archeological and paleogeographical researches of the Altai Mousterian cave (Southern Siberia, USSR)	682
BROOK, George A. - BURNET, David A. - COWART, James B.: Evidence of quaternary environmental changes in Eastern and Southern Africa from cave and rock shelter sediments	287	DEÁK, József: Dating the karst thermal waters in the Eger area	570
BUCK, Marcus: Reinterpretation of primary gypsum deposits in Guadalupe Caves, New Mexico	662	DOBŘICHEV, Mladen: Computer-aided description of caves, based on conventional measurement	677
BUCK, Marcus J.: C-O isotopic composition of subaqueous calcite spar deposits in Guadalupe caves, New Mexico - implications for a thermal water genesis	649	DREYBRODT, Wolfgang: Karst Development in its Initial State: a Model of Speleogenesis	174
BUDAVÁRY, Ágota - GRYNAEUS, Tamás: Results of electroenkephalographic (EEG) and psychological examinations of cave explorers	229	DREYBRODT, Wolfgang: The effect of MgCO <sub>3</sub> to the solubility of calcite: enhanced aggressiveness ?	177
		DUBLYANSKY, V. N. - DUBLYANSKAYA, G. N. - SHIPUNOV, V. A.: Space-time of the karst cavity formation	687

DUBLYANSKY, Viktor - MILJUCHIKIN, Andrej - REZVAN, Vladimir - SHULIK, Natalija - SHLJAKOVA, Larisa: Some peculiarities of vadose Mchishta regime (in Russian)	590	FORTI, Paolo - MENICHETTI, Marco - ROSSI, Alberto: Speleothems and speleogenesis of the Faggeto Tondo Cave (Umbria, Italy)	74
DUBLYANSKY, Yuri: The main principles of development and the diagnostic criteria of a carbonatic hydrothermal karst	77	FRACHON, Jean-Claude: Apercu historique sur la plongee souterraine Francaise	519
DUBOIS, Paul - SORRIAUX, Patrick - SOUDET, Henry Jean: Rospo Mare (Adriatic) un paléokarst pétrolier du domaine méditerranéen	481	FRACHON, Jean-Claude: Apercu historique sur les sauvetages speleologiques en France	526
DULINKSKI, Marek - GLAZEK, Jerzy - HERCMAN, Helena: Numerical dating of cave deposits from the High Tatras Mountains (Southern Poland)	666	FRANTZ, Peri: Caves, conservation and children	677
DUSHEVSKY, Vladislav: Determination of the rate of cave development based on archeological data (in Russian)	443	FUCHS, Gerald: Höhlen grabungen in der Steiermark Ergebnisse neuer Forschungen und Probleme	6
DUSHEVSKY, Vladislav P.: Methods of defining the rate of formation of grottoes based on archeological data	661	GABALDON CASASAYAS, Jesús E.: Aspectos topoclimáticos de la cova del masiet (Mont-rat: Tarragona) versus comportamiento estacional de petaloptila aliena Brunner	676
DZULINSKY, Stanislaw - SASS-GUSTKIEWICZ, Maria: Paleophratic hydrothermal karst structures in Zn-Pb sulfide deposits	649	GAJDOS, László - CSÖLLE, Edit - SZILÁGYI, Ferenc: Radioisotopindikation in der Strecke zwischen dem Minerva-Wasserschlänger und der Jósva-Quellengruppe im Baradla-Höhensystem	542
DÉNES, György - SZILÁGYI, Ferenc: Hydrographische Zusammenhänge im Einzugsgebiet des Baradla-Höhensystems Aggtelek-Ungarn	555	GALDENZI, Sandro - MENICHETTI, Marco: Space time evolution of the underground karst system in the Umbria Marche Apennines in Central Italy	648
DÉVAI, György - KOVÁTS, Nőra: Purposes and necessity of grid mapping	115	GAMS, Ivan: International measurements of solution by means of limestone tablets	473
EK, Camille - GEWELT, Michel - ZHANG, Shouyue: Carbon dioxide content of cave sediments and cave air in China Preliminary results	63	GARASIC, Mladen: The latest research of speleological objects in Dinaric Karst area (Yugoslavia) from the geological point of view	232
ERASO ROMERO, Adolfo - de LIMA, Marcelo Taylor: The Itacolomi quartzite karst, Minas Gerais, Brazil: application of the underground drainage direction prediction method	476	GARASIC, Mladen: New concept of the morphogenesis and hydrogeology of the speleological objects in karst area in Croatia (Yugoslavia)	234
ESZTERHÁS, István: Infolge der Denudation der Basaltplateaus Entstandene Pseudokarst-Erscheinungen und Höhlen	222	GAREV, B. L.: Results of the cave fauna studies effected by an amateur biospeleological group from Pleven (in Russian)	460
FABIAN, Calin: The influence of the petrographic subsystem upon the evolution of the karstic system	670	GAREV, B. L.: Maastricht mesosaurus remains from the caves round the town of Pleven	462
FABIAN, Calin: The karstic domain analysed as a depositional system	654	GAÁL, Ludovit: Several remarks on the protection of karst based on the experience gained by the Slovak Speleological Society	294
FERGUSON, Lynn: Taxonomy and distribution of the Eumesocampa (Diplura: Campodeidae) of North America	680	GERGOV, Ventsislav: Prehistoric researches of the caves in midland North Bulgaria (in Russian)	340
FERNOLENDT, Marius - VIRÁG, János - RADU, Ioan - PINTEA, Tamás: Biological considerations concerning the fluorescein dyeing of karstic waters	517	GEWELT, Michel - MEUS, Philippe - JIN, Yuzhang: Physico-chemical analyses and dye tracing of Teng Long Cave waters (Lichuan, Hubei Province, China)	656
FICSSÓR, Lajos - MAJOROS, Zsuzsanna - PETHŐ, Gábor: VLF method for surveying caves	127	GEWELT, Michel - LIU, Minglin - QUINIF, Yves - ZHAO, Shusen: Uranium series dating of speleothems from Teng Long cave (Lichuan, Hubei province, China), preliminary results	665
FILIPPOV, Andrey: Cryokarst of the Vilujan Plateau	580	GIGINEISHVILI, Givi - JISHKARIANI, Jumber: Intensive atmospheric precipitations and formation of high floods in Tskhaltubo cave system (in Russian)	372
FILIPPOV, Andrey: Geology of the Baikal lakeshore caves (in Russian)	583	GINÉS, Ángel - GINÉS, Joaquín: Absolute dating of phreatic speleothems from Coastal Caves of Mallorca (Spain)	191
FORD, Derek: Morphological classification of dissolutional cave systems	652	GLAZEK, Jerzy - JEVLOGIEV, Jordan - KALCHEVA, Veselina - RUDNICKI, Jan: Paleokarst in the vicinity of Ruse (North-eastern Bulgaria)	663
FORD, Derek: Stable isotope studies of subaqueous calcite deposits from thermal water caves	650	GLAZEK, Jerzy: Paleokarst and the neogene paleogeography of Poland	689
FORD, Derek: A review of dating techniques applied to calcite speleothems	665	GNASPINI NETTO, Pedro: Fauna associated with bat guano deposits from brazilian caves (a comparison)	52
FORNOS, Joan J. - GINÉS, Ángel - GINÉS, Joaquín: Paleokarst collapse features in the uppermost miocene of Mallorca Island (Spain)	46	GORBENKO, P. P. - GORBENKO, V. P. - SIMIONKA, J. M. - GORBATCHOV, V. M.: Results of medicobiological experiments dealing with prolonged stay of speleologist in Podolya karst caves (in Russian)	407
FORTI, P. - PENSABANE, G.: The cubic cave pearls of the Carchia Karst System (Apuane Alps, Italy)	69	GORBENKO, V. P. - TOROKHTIN, M. D. - POVSTJANOV, N. E. - LEMKO, I. S. - SIMIONKA, J. M. - GORBENKO, P. P.: The effect of aseptic microclimate of saltmines on the course of experimental burns (in Russian)	393
FORTI, P. - MICHELI, L. - PICCINI, L. - PRANZINI, G. - SASSOLI, U. - TREVISANI, M.: The study of karst regions in Tuscany	488		
FORTI, Paolo: The role of sulfide-sulfate reactions in speleogenesis	71		

GORBENKO, V. P. - TORKHTIN, M. D. -		HUNYADI, Ilona - HAKL, József:	
POVSTYANOY, N. E. - LEMKO, I. S. -		Historical review of one decade radon measurements	
SIMONKA, Y. M. - GORBENKO, P. P.:		in Hungarian caves performed by solid state	
Influence of the aseptic microclimate of salt		nuclear track detection technique	631
mines on curing burns	411	(in Russian)	
(in Russian)			
GORBUNOVA, Klara A. - MAXIMOVICH, Nikolay G.:		HUPPERT, George N. - THORNE, Janet B.:	
Speleogenesis and evolution of earthcrust		Federal cave protection in the United States:	
(in Russian)	386	the Federal Cave Resources Protection act of 1988	188
GRIGOROPOL, Fedon:		HÁLA, József:	
Traitements de l'asthme bronchique dans la mine de		Ethnomedical applications of dripstone in the	
sel de Slanic, Département Prahova, Roumanie	504	Carpathian basin	564
GRIGOROPOL, Fedon:		IORDANSKY, Leonid:	
Recherches pour la decouverte de nouveaux facteurs		Karst caverns morphology of Zeyuria plateau	668
microclimatiques dans la mine de sel de Slanic,		ISACSSON, Gunnar:	
Departement Prahova, Roumanie	506	Cave deposits during glaciations and interglacials	
GRUIA, Lucian:		- An example from the Korallgrottan in middle	
The algal flora in Pestera Muierilor		Sweden	217
(District Gorj - Romania)	679	ISSAR, A.:	
GRUIA, Lucian:		Hydrothermal Karst in the Deserts of Israel	608
Radiosynthesis - a new hypothesis on cave algae		IZÁPY, Gábor - MAUCHA, László:	
autotrophy	687	Subsurface water chemical matter - transportation	
GUNN, John - LOWE, David:		values of karstic areas in Hungary	533
Caves on the Tongan Islands of Tongatapu & 'Eua	204	JAMES, J. M. - ROGERS, P. -	
GUNN, John - GUNAY, Gultekin:		SPATE, A. P.:	
Caves of the Koprucay River Basin & Vicinity,		Speleogenesis of the caves of the Nullarbor Plain,	
Southern Turkey	201	Australia	651
GUNN, John - FLETCHER, Stan -		JANCARIK, Antonin:	
PRIME, David:		Computer processing and speleological and	
Radon daughter concentrations in British Caves:		geological maps	675
Implications for cavers = tourist cave operators	206	JANCARIK, Antonin:	
GUNN, John - WALTERS, Iestyn D. -		Aerosol speleothems - theory and practice	657
VILCOCK, John D.:		JANIEC, Bronislaw:	
Predicting the response to recharge of partially		The problem of CaCO <sub>3</sub> deposition in waters	
instrumented aquifers: towards an adaptive		saturated with carbonates in the light of	
heuristic model	257	field experiments	17
GÉCZY, Gábor - CSIGE, István -		JIMÉNEZ, Antonia Nuñez:	
SOMOGYI, György:		El Agujero Azul de Dean (Bahamas) y su importancia	
Air circulation in caves traced by natural radon	615	en el estudio de las fluctuaciones del nivel del	
HADNAGY, Árpád:		mar	688
Speleogenetic and sedimentological investigations		JIN, Yuzhang - ZHANG, Shouyue:	
in Bears Cave - Bihor Mountains	158	Corrosive test under abnormal temperature and	
HAKL, József - LÉNART, László -		pressure	65
SOMOGYI, György:		KABASHNYUK, V. - BOBYLEV, A. -	
Time integrated radon measurements performed in a		KOROKBA, K.:	
karstic well water	618	The influence of the cavern microclimate with	
HAMILTON, James:		various CO <sub>2</sub> content on the physiological systems	
Geology-geomorphology of the lower devonian bear		and man's capacity for work (in Russian)	426
rock formation karst, Norman Region, N. W. T.,		KACHKOVSKIY, Igor:	
Canada	659	North Vietnamese karst	669
HAMILTON, James P.:		KANDOV, Ivo:	
Hidrology and hydrochemistry of a dolomite karst		Research of food structure of Chiroptera	
in permafrost terrain in the Norman Region, N. W. T.		inhabiting caves with regard to their economic	
Canada	652	significance	677
HARDWICK, Paul - GUNN, John:		KARAKOSTANOGLOU, Iakovos:	
The impact of agricultural operations on British		Some remarks on the genesis and geography of	
caves	198	static ice-shafts	656
HARDWICK, Paul - GUNN, John:		KARAKOSTANOGLOU, Iakovos:	
Cave management and conservation in Britain:		Observations on the glacier's stability of the	
An historical overview	196	ice-shaft system "Eftastomo", Parnassos Mountains,	
HARDWICK, Paul - GUNN, John:		central Greece	654
The limestone cave resources of Great Britain	194	KARDOS, László:	
HAVLICEK, David - TÁSLER, Radko:		The cave of Kálmán-rét (Kálmán clearing)	671
"North Plateau" of Mt. Anne (SW Tasmania)	499	KASHIMA, Naruhiko:	
HILL, Carol A.:		Geochemistry of the secondary phosphate minerals	
Mississippi Valley - type synore karst development	657	from Japanese Islands	142
HIR, János:		KATAEV, Valeriy:	
Oldenburg-type vertebrate fauna from the Pongor		The influence of the structural plan on the	
cave (North Hungary, Bükk Mountains)	521	distribution of underground karst forms	660
HOLLAND, Ernst:		KEVEINÉ BÁRÁNY, Ilona - MUCSI, László:	
Away with the wire	260	Einige Angaben zur Charakterisierung der Lösungs-	
HOLLER, Gato - HOLLER, Margaret:		dolinen in Ungarn	663
North Carolina Granitic Caves: Valuable		KHATIASCHVILY, N. M.:	
Speleological Resources	140	Karst cave microclimate effect on lipid metabolism	
HOLSINGER, John R.:		in patients with neurocirculatory dystonia (NND)	
Preliminary zoogeographic analysis of five groups		(in Russian)	435
of Crustaceans from Anchialine caves in the West		KIKNADZE, Tamaz:	
Indian region	25	Dynamic properties of karst waters and the part	
HORVÁTH, Tibor:		they play in the speleogenesis of mountainous	
Evaluation of the role speleoclimate in the human		countries (in Russian)	369
therapy. Difficulties, open questions	507	KIKNADZE, Tamaz:	
HUBBARD, David A. - HERMAN, Janet S. -		Speleogenesis in the Great Caucasus	672
MITCHELL, Richard S. - HAMMERSCHMIDT, Elmar:		KIPIANI, Shalva - TINTILOZOV, Zurab:	
Cave Saltpetre: chemical, historical and		Principales Étapes de l'Etude Spéléologique de la	
mineralogical Aspects	148	Géorgie	248
KIRPILEV, A. A. - ZAKOPTEROV, V. V.:		KIRPILEV, A. A. - ZAKOPTEROV, V. V.	
Prediction of accelerated karst process zones		using remote sensing	661

KISSELJOV, Vladimir - MINEKOV, Peter: Cave diving explorations of deep karst systems	683	
KITTEL, Erika - WOLLENIK, Franz: Sexualzeichen in Höhle und Fels	306	
KLIMCHOUK, Alexander - JABLOKOVA, Nataly: Evidence of hydrogeological significance of subsurface zone from study of oxygen isotope composition of water (Arabica Massif, W. Caucasus)	653	
KLIMCHOUK, Alexander - AKSEM, Sergej - SHESTOPALOV, Vjacheslav: Gypsum solution rate in karst regions of Western Ukraine under natural conditions and under impact of industrial activity	674	
KNISS, V. A.: About the cave fauna of the South Urals: the results of a ten year biospeleological research (in Russian)	437	
KORZHIK, V. P. - RIDOUSH, B. T.: A "Fresh" cave "Zoloushka" assimilation problems (in Russian)	366	
KORZHIK, Vitaly - MINKEVICH, Irene: On speleoresources approach to study, mastering and protection of caves (in Russian)	452	
KOSA, Attila: A type of vertical cave, considered as "very deep Karrenfeld"	109	
KOSEL, Vladimir - MARTINEK, Vladislav: Summer synusie and distribution of the family Heleomyzidae (Insecta, Diptera) in a cave of the western Carpathians	281	
KOSIK, Miroslav - TULIS, Ján: Physical and chemical research of gypsum in the Cave Stratenská Jaskyna	310	
KOVÁCS, Hajnal: Paradoxical consequences of the impact between man and cave	606	
KOVÁTS, Nóra: How do bats respond to environmental factors?	112	
KRASNOSTEIN, Arkadij E.: Prospects of speleotherapy in Potash mine entries	254	
KRIEG, Walter: Parameter der Höhlengrösse und Raumgrösse	251	
KRUSTEV, K. - BOJANOV, K. - DJAROVA, T. - MATEEV, G.: Comparative study of the adaptation to extreme conditions of a cave mountaineering (in Russian)	396	
KRUSTEV, K. - DJAROVA, T. - MATEEV, G.: The character of quick adaptation of the body at extreme cave conditions (in Russian)	399	
KRUSTEV, K. - DJAROVA, T. - MATEEV, G.: Attempt for assessment of exhaustion degree and changes in functional capacity of speleologists during the expedition "BU-56", Spain (in Russian)	401	
KUCERA, Bohumil: Development of caves in Bohemian karst	671	
KUCERA, Bohumil: System of registration of caves in the Czech Socialist Republik	681	
LATHAM, A. G. - SCHWARCZ, H. P.: Dating of contaminated travertines	80	
LATHAM, Alfred G.: Magnetization of speleothems: detrital or chemical	82	
LAURITZEN, Stein-Erik: Shear, tension or both - a critical view on the prediction potential for caves	118	
LAURITZEN, Stein-Erik: Scallop dominant discharge	123	
LEMKO, Ivan: Asthma bronchiale speleotherapy in Solotvino salt mines	676	
LEMKO, Olga: Bronchitis chronica speleotherapy peculiarities in Solotvino salt mines	684	
LIEBE, Pál: Thermalkarst-systems in Hungary - Exploration and problems thereof	566	
LORBERER, Árpád - RONAKI, László: Pinlike "peastone"-speleothems as indicators of draught in caves	151	
LORDKIPANIDZE, David O.: Environment of stone-aged people's habitation in the caves of Western Georgia (on the materials of the cave site Ortvala-Klde)		681
LUND, Cecilie - ERASO, Adolfo: The endogenic drainage at the karst area of Glomdalen, Melfjord-Utbyggingen, the prediction method and its results		9
LUNDBERG, Joyce: Speleothem dating by mass spectrometry		667
LUNDBERG, Joyce: Dolomite pavements in N. W. T., Canada		658
LYACH, V. - CHONKA, J.: Distance results of speleotherapy on the patients with bronchial asthma of the population of Trans- carpathian region (in Russian)		421
LYSENKO, Vladimir: Fluorit caves in the Decin Sneznik (Czechoslovakia)		308
LYSENKO, Vladimir: Linear tectonics as factor of karstification		661
LÉNÁRT, László - BALLA, Bélané: On the fluctuation of the number of the bats living in the Létrási-Vizes Cave (Bükk Mountains, Hungary) during the years 1975-1989		316
LÉNÁRT, László: Types of postage-stamps and picture-postcards containing cavemotives		312
LÉNÁRT, László - SOMOGYI, György - HAKL, József - HUNYADI, Ilona: Radon mapping in caves of Eastern Bükk region		620
MAIS, Karl: Speldok-Austria, das Dokumentationssystem der Karst- und Höhlenkundl. Abt. des Naturhist. Muse- ums in Wien und des Verbandes Öst. Höhlenforscher		553
MALTSEV, V. A. - MALISHEVSKY, D. I.: About the hydrothermal stage on the later part of evolution of the Capp-Coutunn cave system		649
MALTSEV, Vladimir A.: The influence of season changes of the cave microclimate to the gypsum genesis		658
MALTSEV, Vladimir A. - MALISHEVSKY, Dmitriy I.: Karst cave minerals of USSR		658
MAMATKULOV, M. M.: Paleokarst of Central Asia		577
MARTINEZ DE CAÑAS, Jacinto J.: Consideraciones en torno a la cueva de Penches (Burgos) y sus representaciones parietales		245
MARTINEZ FLOREZ, Julio: Preliminary investigation of osseous remains found in the middle quaternary in the cavern of Santa Engracia - La Rioja (Spain)		684
MAUCHA, László: Climatic cumulative method for estimating infiltration in karst areas		536
MAUCHA, László: Estimation of infiltration in karst areas as related to climate		531
MAVLYUDOV, Bulat: Snow and ice formation in caves and there regime		295
MAVLYUDOV, Bulat: Cave glaciation		298
MAXWELL, Charles: Underwater exploration of Dragon's Breath Lake (1987)		134
MENICHETTI, Marco: Underground hydrogeology of Monte Cucco karst system in Central Italy		673
MENICHETTI, Marco: Tectonic control in the genesis and the evolution of karstic systems in Central Apennines Italy		659
MIHEVC, Andrej: The remains of gears of the first explorers of Skocjanske Jame and Kacna Jama		673
MIKHAILOV, Vasil: Paleokarst of Tyan-Shan Mts. (Central Asia, USSR)		662
MIKHAILOV, Vasil: The origin and development of caves in glaciers: a case studies in the Tyan-Shan Mts. (USSR)		670
MILLER, Thomas: Fluvial karst development in the Humid Tropics		650
MILLER, Thomas E.: Cave development in Belize, Central America		670

MIOUGE, Nikolaj: Communities of troglobitic invertebrates in the caves of the West Transcaucasus and the Mountainous Crimea	678	PETROV, I. - KOSTOV, D.: The interdisciplinary approach in the training and the socializing in speleology from the early childhood and adolescence (in Russian)	362
MIOUGE, Nikolaj: Biospeleological map of Mountainous Crimea and West Transcaucasus	678	PICCINI, Leonardo - PRANZINI, Giovanni: Karst of the Apuan Alps Initial hypotheses on their origin and development	497
MIURA, Hajime: Surface features and their relations to the caves in the Akiyoshi plateau in Japan	21	PINEDO, Roberto: A sedimental study of detrital materials in the Hayal de Ponata System, Sierra Salvada, North Spain	92
MOTYKA, Jacek: Karst features in Triassic limestones and dolomites of Olkusz Area (SW Poland)	219	PIROS, Olga - GYURICZA, György: The lithological structure of cave Baradla in Aggtelek and of its environment	623
MUCSI, János - HORVÁTH, Tibor: Care of asthmatic children in the Hospital cave in Tapoca	132	PONTA, George - MARIN, Constantin: Karstic aquifers in Sebes Mountains - Romania	463
MUCSI, László: The connection between the different soil-types and the seeping water system in the cave Hajnóczy	226	POULIANOS, Nickos: Further data on the lower middle pleistocene Petralona cave	683
MUGLOVA, Penka - STOEV, Alexey: A projecting system with the functions of measuring time in the cave Monastery at Derevny Krasen (in Russian)	337	PRIDE, Thomas E. - OGDEN, Albert E. - HARVEY, Michael J.: Biology and water quality of caves receiving urban runoff in Cookeville, Tennessee, USA	27
MUGLOVA, Penka - STOEV, Alexey: Linear egouttative hollows-genesis, evolution and practical means in the speleoclimatology	350	PROUTLOVE, Graham: Cave dwelling fishes of the world	683
MULAOMEROVIC, Jasminko: The paleolithic of Middle Bosnia (Yugoslavia)	239	RACOVITA, Gheorghe: Topoclimatical particularities of a glaciary cave: Ghetarul de la Scarisoara (Bihor Mountains, Romania)	655
MULAOMEROVIC, Jasminko: Rock drawings in Bosnia (part of Yugoslavia)	682	RAICHEV, George: Some considerations on the geomorphological development of the Triangular cave in the west Rhodope Mountains, based on sedimentation analysis	324
MULAOMEROVIC, Jasminko: Prehistoric men and caves of Malta	682	RAITCHEV, Dimiter: Some problems concerning the dating and structure of pleistocene cave deposits in the Triangular cave in the Karst Spring region, W.Rhodope, Bg.	269
McCLURG, David: Proposed standards for caving equipment and techniques	677	RAITCHEV, Dimiter - RAICHEV, George: Some climatic phenomena in the Yagodina cave used by eneolotic dwellers	327
NINI, Roberto - De ANGELIS, Maria Cristina - ROSSI, Roberto: The Coccia cave at Narni - (TR) Italy	688	RAITSCHEV, Ivan M.: Studies on Rove Beetles (Coleoptera, Staphylinidae) in the caves in Bulgaria	58
NOVOTNY, Ladislav: Tertiary sediments Stratena Cave system (in Russian)	597	RAJCZY, M. - BUCZKO, K.: The development of the vegetation in lamp-lit areas of the cave Szemlő-hegyi-barlang, Budapest, Hungary	514
NOVOTNY, Ladislav: Tertiary cave levels and denuded surfaces in the Slovak Paradise (in Russian)	600	RAKVIASHVILI, Kiaso: Caves in the South Okriba thrust zone, Western Georgia	667
OGDEN, Albert E. - COLLAR, Paul D.: Theoretical considerations for the origin of Edwards Aquifer Caves in the Balcones Fault Zone, Texas, USA	145	RAYCHEVA, Yovka: Cave geology of the Arda River basin, Bulgaria	321
ONAC, Bogdan P.: On a new mineral paragenesis in the Cave Ungurului (Padurea Craiului Mts.)	655	REEDER, Philip P. - DAY, Michael J.: Lead Mining of Caves in the Driftless Area of Southwest Wisconsin and Northwest Illinois, USA	137
OVSTEDAL, Jarl - LAURITZEN, Stein-Erik: The Siriodja Karst Aquifer, Nordland, Northern Norway	121	REINER, Andreas - KENPE, Stephan: Recent and paleokarst systems and their relation to ore mineralization in the Iberg-Reef-Complex, Harz Mountains	1
PAS, van der, J. P.: Speleophilately	512	REZVAN, Vladimir - KISELEV, Vladimir: Speleological events in the USSR in the years 1962-1988 (in Russian)	602
PAVUZA, Rudolf - TRAINDL, Helmut: Hinweise auf aufsteigende Karstwässer in Alpinen Karstquellen	272	REZVAN, Vladimir D.: Hydrogeological zonation of Sochi speleological region (West Caucasus)	668
PECHORIKIN, Andrai - PECHORIKIN, Igor - ZAKOPTELOW, Valery: Paleokarst of the South-Western part of Melekesskaja depression (in Russian)	378	RONAKI, László: Quantitative spectrofluorometric determination of fluorescein dye used in tracing of underground water	215
PECHORIKIN, Andrai: Regional regularities of Russian platform karst	383	RUDNICKI, Jan: Relation between natural convection and cave formation in hydrothermal karst	14
PEKELADOV, Michail: Some aspects of distribution of fishes in the subaqueous caves near Kugitang-Tau Mountains	679	RUGGIERI, Rosario: Fenomeni carsici nel territorio di pachino (Sicilia sud-orientale)	491
PETRESCU, Mircea: Cave protection - a theoretical approach	683	RUSDEA, Evelyn: Topoclimatic research in the Eggerloch cave (Carinthia, Austria)	675
PETROCHILOU, Anna: Sculptures et gravures rupestres al'ile de Naxos depuis l'époque préhistorique jusque à nos jours	153	RÁDAI, Ödön: Aerospace data and karst exploration - exploitation	548
PETROV, I. - NIKOLOVA-BONEVA, A. - BOSHEV, N.: Vision changes of four speleologists following a one-month cave stay (in Russian)	354	RÁDAI, Ödön: Paleo-karstic phenomena and their recent appearance	664
PETROV, I. - NIKOLOVA-BONEVA, A. - BOSHEV, N.: Circadian biorhythm of four participants in a 30-day cave isolation (in Russian)	358		

RÁDAI, Ödön:	SILVESTRU, Emil:
Tropical karstic areas hydrological and hydro-	Genesis and evolution of the mirabilite in the
geological exploration by aerospace methods	cave Izvorul Tausoarelor
	657
RÁKOSY-TICAN, Lenuta - GRUIA, Lucian -	SILVESTRU, Emil:
PLAMADA, Emanuel:	Hydrothermally-generated karst in Romania
Data on the lamp flora affecting the Ursilor Cave	648
at Chiscau	
RÁKOSY-TICAN, Lenuta - MOMEU, Laura -	SIMIONKA, J.:
LÖRINCZI, Francisc:	Concentration of microorganisms in speleobiotop
Investigations on the microflora in the Vadu	of salt mine and karst cave perspektive for
Crisului Cave (Padurea Craiului Mts.) - Romania	speleothemesis (in Russian)
	403
SAIZ QUEVEDO, Luisa - FERNANDEZ SANDINO, Javier A. -	SIMIONKA, J. - POP, I. -
FERNANDEZ IBANEZ, Carmelo:	CHONKA, J. - CHONKA, K. -
Introducción al Estudio del Santuario Esquemático	SIMIONKA, M.:
de la Caverna de "Peña Esquillas"	Some aspects of resistance patients organism with
	chronic illness of respiratory system in conditions
	of salt mine (in Russian)
	413
SASOWSKY, Ira D. - WHITE, William B. -	SJÖBERG, Rabbe:
MEDVILLE, Douglas M.:	Weathering studies on pseudokarst-caves along the
The remarkably constant longitudinal profile of	northern Swedish Coast
Toothpick stream, Friars Hole cave system,	290
West Virginia, U. S. A.	
	284
SCHRODER, Iain:	SMITH, D. I. - GREENAWAY, M. A. -
Some Caves in silicious rocks in Norway	SPATE, A. P.:
	Absolute measurement of surface limestone
	erosion in Australia
	539
SCHROEDER, Jacques:	SNETKOV, Egeniy:
Karsts et glaciations dans l'est Canadien	Single steel rope technique
	684
SCHROEDER, Jacques:	SONG, Lin Hua - LIU, Hong:
L'aménagement des grottes au Quebec	Cockpit karst and geological structures in South
	Yunnan, China
	668
SCHÖNE, Tilo:	SONG, Lin Hua:
Genauigkeit von Höhlenplänen	Weather dependence of evolution sequence from
	Fengcong to Fengling
	668
SCUKA, Julius - RODA, Stefan jun. -	SONG, Lin Hua:
RAJMAN, Ladislav - RODA, Stefan:	Subsurface reservoirs and karst geomorphology
Ein Thermodynamisches Modell Vertikaler Höhlen	666
vom Typ "Aven"	
	STANKOVA, Elena - VELIKOV, Borislav:
	Hydrochemical investigations of cave waters in
	the mid Rhodope Mountains , Bulgaria
	(in Russian)
	348
SERAFIMOV, K. B.:	STENSON, Ronald:
Individual help to partner	Submerged dolomitic karren in Fresh Water Lakes
	658
SERAFIMOV, K. B.:	STOEV, Alexej - GUERASSIMOVA-TOMOVA, Vassilka -
The felling energy dampers prospecting for	STOYTCHEV, Todor:
improving the safety of cave exploration	Complexe de grottes pres du village Bajlovo,
	region de Sofia (Bulgarie) et son utilisation
	par l'homme
	330
SERAFIMOV, K. B.:	STOYTCHEV, Todor - STOEV, Alexey -
Sport- technical description of vertical routes	RADOSLAVOVA, Tsvetanka - STOYTCHeva, Ulyana:
	Astronomical motives in rock art designs in
	Bulgarian caves
	(in Russian)
	334
SERBAN, Mihai:	STUMMER, Günter:
Complex wall microrelief in caves and developed	EDV-gestütztes Höhlenverzeichnis in Österreich
turbulence	545
SGIBNEV, Valentin V.:	SVENSSON, Uwe - KEMPE, Stephan:
Zonation of karst in Tien-Shan and plate tectonics	Hydrochemistry of karst waters in the Iberg-Reef-
	Komplex, Harz Mountains
	3
SGIBNEV, Valentin V.:	SWEET, Geraldine:
Tectonics boundaries and stages of karstification	Subcutaneous drainage and cave development in the
in Tien-Shan	Northern Interlake Area, Manitoba, Canada
	275
SGIBNEV, Valentin V.:	SWEET, Geraldine:
Cave site Sel-Ungur and paleogeography of upper	Karst pavements, depressions and cave development
pleistocene in southern Tien-Shan	in the Interlake Area of Manitoba: a random rela-
	tionship?
	278
SHAHINYAN, S. M. - GEVORGYAN, A. A.:	SZENTES, George:
Cave dwellings with stone doors	Evolution of tropical karst and caves in the Red
(in Russian)	River Delta region
	106
SHAHINYAN, S. M.:	SZUNYOGH, Gábor:
The "Xenophon dwellings" and their analogues in	The theoretical investigation of the origin of
the basin of Lake Sevan	spherical caverns of thermal origin (second
(in Russian)	approach)
	648
SHAHINYAN, Samvel M. - GEVORGYAN, Armen A.:	SZUNYOGH, Gábor:
Karstogenic peculiarities of the karst structures	Hierarchical system of cave fractures and its
in the lime massive of the region of Vaik of the	role in the prediction of cave-in hazards
Armenian S. S. R.	(in Russian)
	648
SHI MENG, Xiong - ZHANG, Shouyue:	SZYNKIEWICZ, Adam:
Simulation test for developing model on cave	Influence of lithology on development of karst
system	forms in upper jurassic limestones on polish
	Jura region
	664
SHOPOV, Yavor:	SZÉKELY, Kinga - WOJCIK, Zbigniew:
Genetic classification of cave minerals	Problems of history of geology
	683
SHOPOV, Yavor:	SÁRVÁRY, István:
Bases and structure of the international	Estimation of velocities for tracer experiments
programme "Luminescence of cave minerals" of the	651
Commission of UIS	
SHUTOV, Yu. I. - SEVOST'YANOV, E. M.:	T. BOLNER, Katalin - TARDY, János -
High-altitude zonation of mid-mountain karst	NÉMEDI, László:
connected with nival corrosion	Evaluation of the environmental impacts in Bud-
	apest's caves on the basis of the study of the
	quality of dripping waters
	634
SILVESTRU, Emil:	T. BOLNER, Katalin:
Proposals for a litho-genetical classification of	Results of bat-registration works in the cave of
karst and karst-like features	Pál-völgy
	680

TARDY, János - HIROS, László: The aeroion-concentration of caves based on continuous measurements	640	VERESS, Márton - PÉNTEK, Kálmán: Kartographic representation of the extension of karstification	162
TARDY, János: A complex study of the environmental impacts in Budapest's caves with particular respects to spe- cial climatic tests and the possibilities of med.	686	VJATCHIN, Andrej - REZVAN, Vladimir: Thirty years of soviet caving (in Russian)	593
TARKHNISHVILI, I. D.: Karst cave microclimate effect in chronic non- specific lung diseases (in Russian)	423	VUKOV, Péter: Der Esperanto in der Speleologie	509
TINTILOZOV, Zurab - KIPIANI, Shalva - TSIKARISHVILI, Kukuri: Climate and speleogenetic in mountains (The Great Caucasus as an example)	165	VÉGH, Zsolt: Characterization of the climate of Baradla cave with measuring its carbon dioxide content systematically	627
TOROKHTIN, Alexander: Speleotherapy of patients suffering from asthma bronchiale concomitant with cardiovascular pathology	675	VÉGH, Zsolt: The problem of the lampflora in Baradla Cave	559
TOROKHTIN, Alexander: Speleotherapy and prospects of its development	676	WANG, Xunyi: The longest Karst caves in China	487
TRAJANO, Eleonora: Preliminary study on the chemical communication in the troglobite catfish, <i>Pimelodella kronei</i> (Ribeiro, 1907) from Southeastern Brazil	49	WARILD, Alan: Caves of Zongolica (Mexico)	266
TSIKARISHVILI, K. D.: Speleoclimate and its practical importance in the national economy (in Russian)	433	WARILD, Alan: An Australian Topofil	680
TUEV, A. V. - VERIKHOVA, L. A. - NOKRINA, L. M. - KRASNOSHSTEIN, M. A.: Experiences in curing patients with easier cases of chronic nonspecific sicknesses in Potash Pits (in Russian)	430	WHITE, Elizabeth L. - WHITE, William B.: Storm water management in karst areas	209
TULIS, Ján: The importance of disjunctive tectonics in development of underground karst (in Russian)	454	WHITE, William B. - BRENNAN, Edward S.: Luminescence of speleothems due to fulvic acid and other activators	212
TULIS, Ján: A representation of complicated caves systems (on an example of Stratenska cave) (in Russian)	457	WHITE, William B. - WHITE, Elizabeth: Evolution of the Plateau Margin Karst of Tennessee and Alabama, USA	659
TULUCAN, Tiberiu: Genetic classification of the endo-volcano-karst phenomena from Romania. Aspects of their distribution in Carpathians range	685	WOJCICK, Zbigniew: Geomorphological cycle in karst - ideas and reality	685
TURINA, Inna: Evolution of paleokarst cavities in carbonaceous series (in Russian)	381	WORTHINGTON, S. R. H.: Cave sediments: glimpses of the past	665
TÁSLER, Radko - HAVLICEK, David: New discoveries in Vecná Labuz cave (Julian Alps, Yugoslavia)	672	YAGER, Jill: The reproduction of Remipede Crustaceans	679
USHVERIDZE, G. A.: Results and prospects of speleotherapy in the Georgian Soviet Socialist Republic (in Russian)	588	YONGE, Charles: Isotopic studies of speleothems from Rats Nest Cave, Alberta, Canada	666
VALEN, Vidar - LAURITZEN, Stein-Erik: Sedimentology in Sirioda cave, Nordland, Northen Norway	125	YONGE, Charles J.: Cave exploration in the Canadian Rocky Mountains	168
VANDENVINNE, Roger: Localisation Electromagnetique en Surface de Deux Grottes de Belgique	67	YONGE, Charles J.: The Rats Nest Cave project	170
VANIAN, R. A.: Morphology of caves of the Armenian SSR along the lines of their genetic characterization	669	YUAN, Daoxian: The origin of Heishuidong Cave, Menzi County, Yunnan province	673
VARGA, Laszlo - KOVACS, Andras - SZABO, Zoltan: Paleokarst phenomena in the Suncuius - Zece Hotare area	664	YUAN, Daoxian: Speleology and underground reservoirs	685
VARGA, Laszlo - NAGY, Istvan - BAZSA, Iulia: The Wind's cavern genesis	652	ZAKOPTELOV, Valery - DERGACHEV, Sergey: Studies of chalk paleokarst development using database "Karst"	660
VENI, George: Hydrology and geochemistry of a large thermal karst spring, Grutas de Tolantongo, Hidalgo, Mexico	662	ZHANG, Shouyue: The measurement of karst denudation in Xizang (Tibet) and Zhejiang, China	60
VENI, George: Geochemical evolution of a cave stream	653	ZHAPARKHANOV, S. Zh.: Fissured karst waters of Central Kazakhstan	654
VENI, George: Geologic factors in the preservation and management of the Maya Naj Tunich Cave paintings, Peten, Guatemala	681	ZHU, Xuewen: The Mianshan - Type karst in West China	304
VERESS, Márton: Karstification of covered paleokarst surfaces depend on uncovering	55	ZHANG, Ren - TAN, Fengjia: Characteristics and development of Wanhuayan Cave, Chenzhou City, Hunan	485
VERESS, Márton - FUTO, János: Experiences of mapping of eroding karst cavities which were formed in current karst water zone	682	ZÁMBO, László - MICZEK, György: Karst chemical characteristics of infiltrating water in karstic soils according to the corrosion capacity on covered limestone	575
		ZÁMBO, László: Calculation of karstic denudation on the basis of observations of the soil impact on corrosion	573

## CONTENTS

## INHALT

## TABLE DE MATIÈRES

## INDICE

## INDICE

## СОДЕРЖАНИЕ

## 2

SESSIONS  
THEMENKREISEN  
SESSIONS  
SESSIONI  
SESIONES  
СЕКЦИЯ

## Session A1

Cave formation through thermal water activity  
Höhlenbildung unter Mitwirkung von Thermalwässern  
Formation des grottes sous l'effect d'eaux thermales  
Formación de cuevas mediante fuentes termales  
Образование пещер при участии термальных вод

BUCK, Marcus: Reinterpretation of primary gypsum deposits in Guadalupe Caves, New Mexico	662	JIN, Yuzhang - ZHANG, Shouyue: Corrosive test under abnormal temperature and pressure	65
BUCK, Marcus J.: C-O isotopic composition of subaqueous calcite spar deposits in Guadalupe caves, New Mexico - implications for a thermal water genesis	649	LIEBE, Pál: Thermalkarst-systems in Hungary - Exploration and problems thereof	566
CSER, Ferenc: Calculations on the formation of wholes by corrosion	470	MALTSEV, V. A. - MALISHEVSKY, D. I.: About the hydrothermal stage on the later part of evolution of the Capp-Coutunn cave system	649
DEÁK, József: Dating the karst thermal waters in the Eger area	570	RUDNICKI, Jan: Relation between natural convection and cave formation in hydrothermal karst	14
DUBLYANSKY, Yuri: The main principles of development and the diag- nostic criteria of a carbonatic hydrothermal karst	77	SCUKA, Julius - RODA, Stefan jun. - RAJMAN, Ladislav - RODA, Stefan: Ein Thermodynamisches Modell Vertikaler Höhlen vom Typ "Aven"	172
DZULINSKY, Stanislaw - SASS-GUSTKIEWICZ, Maria: Paleopneumatic hydrothermal karst structures in Zn-Pb sulfide deposits	649	SILVESTRU, Emil: Hydrothermally-generated karst in Romania	648
FORD, Derek: Stable isotope studies of subaqueous calcite deposits from thermal water caves	650	SZUNYOGH, Gábor: The theoretical investigation of the origin of spherical caverns of thermal origin (second approach)	648
GALDENZI, Sandro - MENICHETTI, Marco: Space time evolution of the underground karst system in the Umbria Marche Apennines in Central Italy	648	VENI, George: Hydrology and geochemistry of a large thermal karst spring, Grutas de Tolantongo, Hidalgo, Mexico	662
ISSAR, A.: Hydrothermal Karst in the Deserts of Israel	608		

## Session A2

The karst water cycle and its role in cave evolution  
Die Karstwasserzirkulation und ihre Rolle bei der Höhlenentstehung  
Circulation karstique et son rôle dans la formation des grottes  
Flujo de aguas cársticas y su papel en la formación de cuevas  
Движение карстовых вод и их роль в образовании пещер

BELTYUKOV, German: The evaluation of the recent karst process activity by hydrochemical methods (in Russian)	376	DUBLYANSKY, Viktor - MILJUCHIKIN, Andrej - REZVAN, Vladimir - SHULIK, Natalija - SHLJAKOVA, Larisa: Some peculiarities of Vaucluse Mchishta regime (in Russian)	590
BURIN, Klement - KOLEV, Dimitar - SPASSOV, Konstantin: Experiments in tracing karst underground waters with bromine using neutron activation analysis	130	DÉNES, György - SZILÁGYI, Ferenc: Hydrographische Zusammenhänge im Einzugsgebiet des Baradla-Höhlensystems Aggtelek-Ungarn	555
CIGNA, Arrigo A.: Underground water dating by tritium measurements	562	FABIAN, Calin: The karstic domain analysed as a depositional system	654
CSEPREGI, A. - LORBERER, A.: Computer simulation of the karstwater level changes in the Transdanubian Mountain Ranges	466	FORD, Derek: Morphological classification of dissolutional cave systems	652
DE IPIÑA, Jesus Maria LZ. - PINEDO, Roberto: Features and hidrologic running of the karst in Sierra Salvada (Alava, Burgos, Vizcaya, North Spain)	85	GAJDOS, László - CSÖLLE, Edit - SZILÁGYI, Ferenc: Radioisotopindikation in der Strecke zwischen dem Minerva-Wasserschlänger und der Jósva-Quellen- gruppe im Baradla-Höhlensystem	542
DREYBRODT, Wolfgang: Karst development in its initial state: a model of speleogenesis	174	GARASIC, Mladen: New concept of the morphogenesis and hydro- geology of the speleological objects in karst area in Croatia (Yugoslavia)	234
DUBLYANSKY, V. N. - DUBLYANSKAYA, G. N. - SHIPUNOVA, V. A.: Space-time of the karst cavity formation	687		

GEWELT, Michel - MEUS, Philippe -		
JIN, Yuzhang:		
Physico-chemical analyses and dye tracing of Teng Long Cave waters (Lichuan, Hubei Province, China)	656	
GIGINEISHVILI, Givi - JISHKARIANI, Jumber:		
Intensive atmospheric precipitations and formation of high floods in Tskhaltubo cave system (in Russian)	372	
GUNN, John - WALTERS, Iestyn D. -		
WILCOCK, John D.:		
Predicting the response to recharge of partially instrumented aquifers: towards an adaptive heuristic model	257	
HAMILTON, James P.:		
Hydrology and hydrochemistry of a dolomite karst in permafrost terrain in the Norman Region, N. W. T. Canada	652	
IZÁPY, Gábor - MAUCHA, László:		
Subsurface water chemical matter - transportation values of karstic areas in Hungary	533	
JAMES, J. M. - ROGERS, P. -		
SPATE, A. P.:		
Speleogenesis of the caves of the Nullarbor Plain, Australia	651	
KIKNADZE, Tamaz:		
Dynamic properties of karst waters and the part they play in the speleogenesis of mountainous countries (in Russian)	369	
KLIMCHOUK, Alexander - JABLOKOVA, Nataly:		
Evidence of hydrogeological significance of subsurface zone from study of oxygen isotope composition of water (Arabica Massif, W.Caucasus)	653	
KOSA, Attila:		
A type of vertical cave, considered as "very deep Karrenfeld"	109	
KRIEG, Walter:		
Parameter der Höhlengröße und Raumgrösse	251	
LAURITZEN, Stein-Erik:		
Scallop dominant discharge	123	
LUND, Cecilia - ERASO, Adolfo:		
The endogenic drainage at the karst area of Glomdalen, Melfjord-Utbyggingen, the prediction method and its results	9	
MAUCHA, László:		
Climatic cumulative method for estimating infiltration in karst areas	536	
MAUCHA, László:		
Estimation of infiltration in karst areas as related to climate	531	
MILLER, Thomas:		
Fluvial karst development in the Humid Tropics	650	
OGDEN, Albert E. - COLLAR, Paul D.:		
Theoretical Considerations for the Origin of Edwards Aquifer Caves in the Balcones Fault Zone, Texas, USA	145	
OVSTEDAL, Jarl - LAURITZEN, Stein-Erik:		
The Sirijoda Karst Aquifer, Nordland, Northern Norway	121	
PAVUZA, Rudolf - TRAINDL, Helmut:		
Hinweise auf aufsteigende Karstwasser in Alpinen Karstquellen	272	
PONTA, George - MARIN, Constantin:		
Karstic aquifers in Sebes Mountains - Romania	463	
RONAKI, László:		
Quantitative spectrofluorometric determination of fluorescein dye used in tracing of underground water	215	
RÁDAI, Ödön:		
Aerospace data and karst exploration - exploitation	548	
SERBAN, Mihai:		
Complex wall microrelief in caves and developed turbulence	653	
SHAHINYAN, Samvel M. - GEVORGIAN, Armen A.:		
Karstogenic peculiarities of the karst structures in the lime massive of the region of Vaik of the Armenian S. S. R.	651	
SHI MENG, Xiong - ZHANG, Shouyue:		
Simulation test for developing model on cave system	61	
SILVESTRU, Emil:		
Proposals for a litho-genetical classification of karst and karst-like features	672	
STANKOVA, Elena - VELIKOV, Borislav:		
Hydrochemical investigations of cave waters in the mid Rhodope Mountains, Bulgaria (in Russian)	348	
SVENSSON, Uwe - KEMPE, Stephan:		
Hydrochemistry of karst waters in the Iberg-Reef-Komplex, Harz Mountains	3	
SWEET, Geraldine:		
Subcutaneous drainage and cave development in the Northern Interlake Area, Manitoba, Canada	275	
TULIS, Ján:		
The importance of disjunctive tectonics in development of underground karst (in Russian)	454	
VARGA, Laszlo - NAGY, Istvan - BAZSA, Iulia:		
The Wind's cavern genesis	652	
VENI, George:		
Geochemical evolution of a cave stream	653	
ZHANG, Shouyue:		
The measurement of karst denudation in Xizang (Tibet) and Zhejiang, China	60	
ZHAPARKHANOV, S. Zh.:		
Fissured karst waters of Central Kazakhstan	654	
ZÁMBO, László - MICZEK, György:		
Karst chemical characteristics of infiltrating water in karstic soils according to the corrosion capacity on covered limestone	575	

#### Session A3

Genetic of cave concretions/formations

Die Genese der Sinterbildung

Genèse des formations des grottes

Formación de cuevas como indicaciones genéticas

Форма пещер как индикатор условий их образования

ANDRAITCHUK, V. N. - KOVALTCHUK, A. I. -		
BELOKRYS, I. A.:		
Cave in siderite	241	
ARAKAWA, Tatsuhiko - HORI, Nobuyuki -		
MIURA, Hajime:		
The ages of one cycle of cave developments in a subtropical Raised Coral Reef Area: Yoron Island, The Ryukyus, Japan	44	
BODOLEA, Ana - VIEHMANN, Iosif:		
The floating calcite from the cave Hoanca Apei (Bihor Mountains - Romania)	655	
DREYBRODT, Wolfgang:		
The effect of MgCO <sub>3</sub> to the solubility of calcite: enhanced aggressiveness ?	177	
EK, Camille - GEWELT, Michel -		
ZHANG, Shouyue:		
Carbon dioxide content of cave sediments and cave air in China Preliminary results	63	
FORTI, P. - PENSABANE, G.:		
The cubic cave pearls of the Corkia Karst System (Apuan Alps, Italy)	69	
FORTI, Paolo:		
The role of sulfide-sulfate reactions in speleogenesis	71	
FORTI, Paolo - MENICHETTI, Marco - ROSSI, Alberto:		
Speleothems and speleogenesis of the Faggeto Tondo Cave (Umbria, Italy)	74	
HILL, Carol A.:		
Mississippi Valley - type synore karst development	657	
HUBBARD, David A. - HERMAN, Janet S. - MITCHELL, Richard S. - HAMMERSCHMIDT, Elmar:		
Cave Saltpetre: chemical, historical and mineralogical aspects	148	
JANCARIK, Antonin:		
Aerosol speleothems - theory and practice	657	

JANIEC, Bronislaw: The problem of CaCO <sub>3</sub> deposition in waters saturated with carbonates in the light of field experiments	17	MAVLYUDOV, Bulat: Cave glaciation	298
KASHIMA, Naruhiko: Geochemistry of the secondary phosphate minerals from Japanese Islands	142	ONAC, Bogdan P.: On a new mineral paragenesis in the Cave Ungurului (Padurea Craiului Mts.)	655
KOSIK, Miroslav - TULIS, Ján: Physical and chemical research of gypsum in the Cave Stratenská Jaskyna	310	PINEDO, Roberto: A sedimental study of detrital materials in the Hayal de Ponata System, Sierra Salvada, North Spain	92
LATHAM, Alfred G.: Magnetization of speleothems: detrital or chemical	82	RACOVITA, Gheorghe: Topoclimatic particularities of a glaciary cave: Ghetarul de la Scarisoara (Bihor Mountains, Romania)	655
LORBERER, Árpád - RONAKI, László: Pinlike "peastone"-speleothems as indicators of draught in caves	151	SHOPOV, Yavor: Genetic classification of cave minerals	101
LYSENKO, Vladimir: Fluorit caves in the Decin Sneznik (Czechoslovakia)	308	SHOPOV, Yavor: Bases and structure of the international programme "Luminescence of cave minerals" of the commission of UIS	98
MALTSEV, Vladimir A.: The influence of season changes of the cave microclimate to the gypsum genesis	658	SILVESTRU, Emil: Genesis and evolution of the mirabilite in the cave Izvorul Taușoarelor	657
MALTSEV, Vladimir A. - MALISHEVSKY, Dmitriy I.: Karst cave minerals of USSR	658	SÁRVÁRY, István: Estimation of velocities for tracer experiments	651
MAVLYUDOV, Bulat: Snow and ice formation in caves and there regime	295	WHITE, William B. - BRENNAN, Edward S.: Luminescence of Speleothems due to Fulvic Acid and other Activators	212

#### Session A4

Surface features and their relations to the caves  
Beziehungen zwischen Oberflächenformen und Höhlen  
Relations entre les formations de surface et les grottes  
Valores de formación superficial como indicaciones genéticas  
Поверхностные и карстовые формы и их связь с условиями образования пещер

ARAKAWA, Tatsuhiko - OSHIRO, Naoki - IGAWA, Hiroyuki: The developments of Limestone Ramparts and Limestone Walls in the Ryukyu Islands, Japan	41	MUGLOVA, Penka - STOEV, Alexey: Linear egouttatic hollows-genesis, evolution and practical means in the speleoclimatology	350
BÁRÁNY-KEVEI, Ilona: Investigation of karst soil of dolinas in Bükk and Aggtelek-Mountains in Hungary	551	NOVOTNY, Ladislav: Tertiary cave levels and denuded surfaces in the Slovak Paradise (in Russian)	600
ERASO ROMERO, Adolfo - de LIMA, Marcelo Taylor: The Itacolomi quartzite karst, Minas Gerais, Brazil: application of the underground drainage direction prediction method	476	SASOWSKY, Ira D. - WHITE, William B. - MEDVILLE, Douglas M.: The remarkably constant longitudinal profile of Toothpick stream, Friars Hole cave system, West Virginia, U. S. A.	284
GAMS, Ivan: International measurements of solution by means of limestone tablets	473	SCHROEDER, Jacques: Karsts et glaciations dans l'est Canadien	660
HAMILTON, James: Geology-geomorphology of the lower devonian bear rock formation karst, Norman Region, N. W. T., Canada	659	SMITH, D. I. - GREENAWAY, M. A. - SPATE, A. P.: Absolute measurement of surface limestone erosion in Australia	539
KATAEV, Valeriy: The influence of the structural plan on the distribution of underground karst forms	660	STENSON, Ronald: Submerged dolomitic karren in Fresh Water Lakes	658
KEVEINÉ BÁRÁNY, Ilona - MUCSI, László: Einige Angaben zur Charakterisierung der Lösungs- dolinen in Ungarn	663	SWEET, Geraldine: Karst pavements, depressions and cave development in the Interlake Area of Manitoba: a random rela- tionship?	278
KIRPILEV, A. A. - ZAKOPTELOV, Valery: Prediction of accelerated karst process zones using remote sensing	661	SZENTES, George: Evolution of tropical karst and caves in the Red River Delta region	106
LAURITZEN, Stein-Erik: Shear, tension or both - a critical view on the prediction potential for caves	118	WHITE, William B. - WHITE, Elizabeth: Evolution of the Plateau Margin Karst of Tennessee and Alabama, USA	659
LUNDBERG, Joyce: Dolomite pavements in N. W. T., Canada	658	ZAKOPTELOV, Valery - DERGACHEV, Sergey: Studies of chalk paleokarst development using database "Karst"	660
LYSENKO, Vladimir: Linear tectonics as factor of karstification	661	ZHU, Xuewen: The Mianshan - Type karst in West China	304
MENICHETTI, Marco: Tectonic control in the genesis and the evolution of karstic systems in Central Apennines Italy	659	ZÁMBO, László: Calculation of karstic denudation on the basis of observations of the soil impact on corrosion	573
MIURA, Hajime: Surface features and their relations to the caves in the Akiyoshi plateau in Japan	21		
MUCSI, László: The connection between the different soil-types and the seeping water system in the cave Hajnóczy	226		

Session A5

BOSÁK, Pavel: A key to paleogeography and stratigraphy of continental periods 663	PECHORKIN, Andrai - PECHORKIN, Igor - ZAKOPTELOV, Valery: Paleokarst of the South-Western part of Melekeskaja depression (in Russian) 378
BOSÁK, Pavel - Lysenko, Vladimir: The evolution of the Bohemian Karst 688	REINER, Andreas - KEMPE, Stephan: Recent and paleokarst systems and their relation to ore mineralization in the Iberg-Reef-Complex, Harz Mountains 1
DUSHEVSKY, Vladislav F.: Methods of defining the rate of formation of grottos based on archeological data 661	RÁDAI, Ödön: Paleo-karstic phenomena and their recent appearance 664
FORNOS, Joan J. - GINÉS, Ángel - GINÉS, Joaquín: Paleokarst collapse features in the uppermost miocene of Mallorca Island (Spain) 46	SZYNKIEWICZ, Adam: Influence of lithology on development of karst forms in upper jurassic limestones on polish jura region 664
GLAZEK, Jerzy - JEVLOGIEV, Jordan - KALCHEVA, Veselina - RUDNICKI, Jan: Paleokarst in the vicinity of Kuse (North-eastern Bulgaria) 663	TURINA, Inna: Evolution of paleokarst cavities in carbonaceous series (in Russian) 381
GLAZEK, Jerzy: Paleokarst and the neogene paleogeography of Poland 689	VARGA, Laszlo - KOVACS, Andras - SZABO, Zoltan: Paleokarst phenomena in the Suncuius - Zece Hotare area 664
JIMÉNEZ, Antonia Nuñez: El Agujero Azul de Dean (Bahamas) y su importancia en el estudio de las fluctuaciones del nivel del mar 688	VERESS, Márton: Karstification of covered paleokarst surfaces depend on uncovering 55
MAMATKULOV, M. M.: Paleokarst of Central Asia 577	WOJCIK, Zbigniew: Geomorphological cycle in karst - ideas and reality 685
MIKHAILOV, Vasil: Paleokarst of Tyan-Shan Mts. (Central Asia, USSR) 662	
MOTYKA, Jacek: Karst features in Triassic limestones and dolomites of Olkusz Area (SW Poland) 219	

Session A6

Relative and absolute dating of cave deposits Relative und absolute Datierung von Höhlensedimenten Datations relatives et absolutes des sédiments de grotte Sedimentos de cuevas fechadas en cronología relativa y absoluta
Палеокарст и его развитие

ARAKAWA, Tatsuhiko: Dating of Growth Rings and their relation to Late Quaternary climatic changes in the Ryukyu Islands, Japan 39	ISACSSON, Gunnar: Cave deposits during glaciations and interglacials - An example from the Korallgrottan in middle Sweden 217
BROOK, George A. - BURNETT, David A. - COWART, James B.: Evidence of quaternary environmental changes in Eastern and Southern Africa from cave and rock shelter sediments 287	LATHAM, A. G. - SCHWARCZ, H. P.: Dating of contaminated travertines 80
DUBOIS, Paul - SORRIAUX, Patrick - SOUDET, Henry Jean: Rospo Mare (Adriatic) un paléokarst pétrolier du domaine méditerranéen 481	LUNDBERG, Joyce: Speleothem dating by mass spectrometry 667
DULINKSKI, Marek - GLAZEK, Jerzy - HERCMAN, Helena: Numerical dating of cave deposits from the High Tatra Mountains (Southern Poland) 666	NOVOTNY, Ladislav: Tertiary sediments Stratena Cave system (in Russian) 597
FORD, Derek: A review of dating techniques applied to calcite speleothems 665	RAITCHEV, Dimiter: Some problems concerning the dating and structure of pleistocene cave deposits in the Triangular cave in the Karst Spring region, W. Rhodope, Bg. 269
GEWELT, Michel - LIU, Minglin - QUINIF, Yves - ZHAO, Shusen: Uranium series dating of speleothems from Teng Long cave (Lichuan, Hubei province, China), preliminary results 665	REEDER, Philip P. - DAY, Michael J.: Lead mining of caves in the Driftless Area of Southwest Wisconsin and Northwest Illinois, USA 137
GINÉS, Ángel - GINÉS, Joaquín: Absolute dating of phreatic speleothems from Coastal Caves of Mallorca (Spain) 191	SHOPOV, Yavor - DERMENDJIEV, Vladimir - BUYKLIEV, Georgy: Investigations on the old variations of the climate and solar activity by a new method - LLNZA of cave flowstone from Bulgaria 95
HADNAGY, Árpád: Speleogenetic and sedimentological investigations in Bears Cave - Bihor Mountains 158	VALEN, Vidar - LAURITZEN, Stein-Erik: Sedimentology in Sirijoda cave, Nordland, Northern Norway 125
	WORTHINGTON, S. R. H.: Cave sediments: glimpses of the past 665
	YONGE, Charles: Isotopic studies of speleothems from Rats Nest Cave, Alberta, Canada 666

Session A7

Regional speleological phenomena

Regionale Speläologie

Phénomènes spéléologiques régionaux

Legitimidad regional de fenómenos espeleológicos

Региональные закономерности спелеогенеза

ANDRAITCHUK, V. - LUKHIN, V.: Large sink in the Ural	666	MIKHAILOV, Vasil: The origin and development of caves in glaciers: a case studies in the Tyan-Shan Mts. (USSR)	670
BERSENEV, Yuri: Karst and features of speleogenesis in the eastern USSR (in Russian)	388	MILLER, Thomas E.: Cave development in Belize, Central America	670
BONEV, Kamen I.: Geologic structural control of karst-forming processes in the plateau Guaso, Southeast Cuba	669	PECHORKIN, Andrai: Regional regularities of Russian platform karst	383
CALANDRI, Gilberto: Jordan karst: geomorphologic and hydrogeologic looks	672	PICCINI, Leonardo - FRANZINI, Giovanni: Karst of the Apuan Alps Initial hypotheses on their origin and development	497
CALANDRI, Gilberto: The karst in the evaporitic diapires of the Northeast Algeria	671	PIROS, Olga - GYURICZA, György: The lithological structure of cave Baradla in Aggtelek and of its environment	623
CALANDRI, Gilberto: Preliminary note on some karst waters of the Middle-Southro Morocco	671	RAICHEV, George: Some considerations on the geomorphological development of the Triangular cave in the west Rhodope Mountains, based on sedimentation analysis	324
COCEAN, Pompei: Types of karstic systems in the Apuseni Mountains	686	RAKVIASHVILI, Kiaso: Caves in the South Okriba thrust zone, Western Georgia	667
DEMEK, Jaromír: Periglacial processes in karst regions	656	RAYCHEVA, Yovka: Cave geology of the Arda River basin, Bulgaria	321
ESZTERHÁS, István: Infolge der Denudation der Basaltpalteaus Entstandene Pseudokarst-Erscheinungen und Höhlen	222	REZVAN, Vladimir D.: Hydrogeological zonation of Sochi speleological region (West Caucasus)	668
FABIAN, Calin: The influence of the petrographic subsystem upon the evolution of the karstic system	670	RUGGIERI, Rosario: Fenomeni carsici nel territorio di pachino (Sicilia sud-orientale)	491
FILIPPOV, Andrey: Cryokarst of the Vilujan Plateau	580	SCHRODER, Iain: Some Caves in silicious rocks in Norway	301
FILIPPOV, Andrey: Geology of the Baikal lakeshore caves (in Russian)	583	SGIBNEV, Valentin V.: Zonation of karst in Tien-Shan and plate tectonics	184
FORTI, P. - MICHELI, L. - PICCINI, L. - FRANZINI, G. - SASSOLI, U. - TREVISANI, M.: The study of karst regions in Tuscany	488	SGIBNEV, Valentin V.: Tectonic boundaries and stages of karstification in Tien-Shan	186
GARASIC, Mladen: The latest research of speleological objects in Dinaric Karst area (Yugoslavia) from the geological point of view	232	SGIBNEV, Valentin V.: Cave site Sel-Ungur and paleogeography of upper pleistocene in southern Tien-Shan	182
GORBUNOVA, Klara A. - MAXIMOVICH, Nikolay G.: Speleogenesis and evolution of earthcrust (in Russian)	386	SHUTOV, Yu. I. - SEVOST'YANOV, E. M.: High-altitude zonation of mid-mountain karst connected with nival corrosion	667
GUNN, John - LOWE, David: Caves on the Tongan Islands of Tongatapu & 'Eua	204	SJÖBERG, Rabbe: Weathering studies on pseudokarst-caves along the northern Swedish Coast	290
GUNN, John - GUNAY, Gultekin: Caves of the Koprucay River Basin & Vicinity, Southern Turkey	201	SONG, Lin Hua - LIU, Hong: Cockpit karst and geological structures in South Yunnan, China	668
HAVLICEK, David - TÁSLER, Radko: "North Plateau" of Mt. Anne (SW Tasmania)	499	SONG, Lin Hua: Weather dependence of evolution sequence from Fengcong to Fengling	668
HOLLER, Cato - HOLLER, Margaret: North Carolina Granitic Caves: Valuable Speleological Resources	140	SONG, Lin Hua: Subsurface reservoirs and karst geomorphology	666
IORDANSKY, Leonid: Karst caverns morphology of Zeyuria plateau	668	TINTILOZOV, Zurab - KIPIANI, Shalva - TSIKARISHVILI, Kukuri: Climate and speleogenetic in mountains (The Great Caucasus as an example)	165
KACHKOVSKIY, Igor: North Vietnamese karst	669	TULUCAN, Tiberiu: Genetic classification of the endo-volcano-karst phenomena from Romania. Aspects of their distribution in Carpathians range	685
KARAKOSTANOGLU, Iakovos: Some remarks on the genesis and geography of static ice-shafts	656	TÁSLER, Radko - HAVLICEK, David: New discoveries in Vecná Labuz cave (Julian Alps, Yugoslavia)	672
KARAKOSTANOGLU, Iakovos: Observations on the glacier's stability of the ice-shaft system "Eftastomo", Parnassos Mountains, central Greece	654	VANIAN, R. A.: Morphology of caves of the Armenian SSR along the lines of their genetic characterization	669
KARDOS, László: The cave of Kálmán-rét (Kálmán clearing)	671	WARILD, Alan: Caves of Zongolica (Mexico)	266
KIKNADZE, Tamaz: Speleogenesis in the Great Caucasus	672	YONGE, Charles J.: Cave exploration in the Canadian Rocky Mountains	168
KIPIANI, Shalva - TINTILOZOV, Zurab: Principales Étapes de l'Etude Spéléologique de la Géorgie	248	YONGE, Charles J.: The Rats Nest Cave project	170
KUCERA, Bohumil: Development of caves in Bohemian karst	671		

YUAN, Daoxian:  
The origin of Heishuidong Cave, Menzi County,  
Yunnan province

673

ZHU, Xuewen - WANG, Xunyi -  
ZHANG, Ren - TAN, Pengjia:  
Characteristics and development of Wanhuayan Cave,  
Chenzhou City, Hunan

485

Session B1

Caves and the environmental pollution

Höhlen und Naturschutz

Les grottes et la conservation de la nature

Las cuevas como indicadores de la contaminación del entorno

Пещеры и охрана природы

ABRAMOV, I. P. - IVANTCHENKO, V. G.:  
Speciality of karst and cavern ecology of the  
Altai  
(in Russian)

391

BALIAN, Sogomon - VANIAN, R. A.:  
On the usage of the karst cave of Archeri,  
the first one in Armenia

674

DÉVAI, György - KOVÁTS, Nőra:  
Purposes and necessity of grid mapping

115

HARDWICK, Paul - GUNN, John:  
The impact of agricultural operations on British  
caves

198

HUPPERT, George N. - THORNE, Janet B.:  
Federal cave protection in the United States:  
the Federal Cave Resources Protection act of 1988

188

SCHROEDER, Jacques:  
L'aménagement des grottes au Québec

673

Session B2

Utilization of karst aquifers with special regard to their pollution  
Die Nutzung der Karstwasserreserven, unter Berücksichtigung möglicher Wasser-

verschmutzung

L'utilisation des aquifères karstiques, tenant compte de leur pollution  
Utilización de los depósitos de aguas cársticas considerando su contaminación

Использование карстовых резервуаров, учитывая их загрязненность

DE IPIÑA, Jesus Maria LZ.:  
Contribution to study of ground-water pollution in  
the Apodaca Karstic Aquifer (Basque Country,  
Northern Spain)

88

KLIMCHOUK, Alexander - AKSEM, Sergej -  
SHESTOPALOV, Vjacheslav:  
Gypsum solution rate in karst regions of Western  
Ukraine under natural conditions and under impact  
of industrial activity

674

RÁDAI, Ödön:  
Tropical karstic areas hydrological and hydro-  
geological exploration by aerospace methods

610

WHITE, Elizabeth L. - WHITE, William B.:  
Storm water management in karst areas

209

YUAN, Daoxian:  
Speleology and underground reservoirs

685

MENICHETTI, Marco:  
Underground hydrogeology of Monte Cucco karst  
system in Central Italy

673

Session B3

Cave climate and curative effect

Klima und Heilwirkung der Höhlen

Le climat des grottes et les cures en grottes

Clima de las cuevas y sus efectos curativos

Климат пещер и спелеотерапия

BUDAVÁRY, Ágota - GRYNAEUS, Tamás:  
Results of electroenkephalographic (EEG) and  
psychological examinations of cave explorers

229

CHIKVASHVILY, G. A.:  
Karst cave microclimate immunocorrection effect  
(in Russian)

586

CHONKA, J. - SIMIONKA, J. -  
POTING, D.:  
Dynamics of microclimate parameters of speleo-  
therapeutic hospital  
(in Russian)

416

CHONKA, J.:  
Clinical affectivity of microclimate treatment  
of salt mine  
(in Russian)

419

GORBENKO, P. P. - GOROKHTIN, M. D. -  
POVSTYANOY, N. E. - LEMKO, I. S. -  
SIMIONKA, J. M. - GORBENKO, P. P.:  
The effect of aseptic microclimate of saltmines  
on the course of experimental burns  
(in Russian)

393

GORBENKO, V. P. - TOROKHTIN, M. D. -  
POVSTYANOY, N. E. - LEMKO, I. S. -  
SIMIONKA, Y. M. - GORBENKO, P. P.:  
Influence of the aseptic microclimate of salt  
mines on curing burns  
(in Russian)

411

GRIGOROPOL, Fedon:  
Traitement de l'asthme bronchique dans la mine de  
sel de Slanic, Département Prahova, Roumanie

504

GRIGOROPOL, Fedon:  
Recherches pour la découverte de nouveaux facteurs  
microclimatiques dans la mine de sel de Slanic,  
Département Prahova, Roumanie

506

GORBENKO, P. P. - GORBENKO, V. P. -  
SIMIONKA, J. M. - GORBATCHOV, V. M.:  
Results of medicobiological experiments dealing  
with prolonged stay of speleologist in Podolya  
karst caves (in Russian)

407

GUNN, John - FLETCHER, Stan - PRIME, David: Radon daughter concentrations in British Caves: Implications for cavers & tourist cave operators	206	PETROV, I. - NIKOLOVA-BONEVA, A. - BOSHEV, N.: Vision changes of four speleologists following a one-month cave stay (in Russian)	354
GÉCZI, Gábor - CSIGE, István - SOMOGYI, György: Air circulation in caves traced by natural radon	615	PETROV, I. - NIKOLOVA-BONEVA, A. - BOSHEV, N.: Circadian biorhythm of four participants in a 30-day cave isolation (in Russian)	358
HAKL, József - LÉNÁRT, László - SOMOGYI, György: Time integrated radon measurements performed in a karstic well water	618	PETROV, I. - KOSTOV, D.: The interdisciplinary approach in the training and the socializing in speleology from the early childhood and adolescence (in Russian)	362
HORVÁTH, Tibor: Evaluation of the role speleoclimate in the human therapy. Difficulties, open questions	507	RUSDEA, Evelyn: Topoclimatic research in the Eggerloch cave (Carinthia, Austria)	675
HUNYADI, Ilona - HAKL, József: Historical review of one decade radon measurements in Hungarian caves performed by solid state nuclear track detection technique	631	SEPIASHVILI, R. I. - DONADZE, D. S.: Speleotherapy role in rehabilitation of patients with chronic bronchitis at Tskhaltubo	674
HÁLA, József: Ethnomedical applications of dripstone in the Carpathian basin	564	SIMIONKA, J.: Concentration of microorganisms in speleobiotope of salt mine and karst cave perspective for speleotherapy (in Russian)	403
KABASHNYUK, V. - BOBYLEV, A. - KOROBKA, K.: The influence of the cavern microclimate with various CO <sub>2</sub> content on the physiological systems and man's capacity for work (in Russian)	426	SIMIONKA, J. - POP, I. - CHONKA, J. - CHONKA, K. - SIMIONKA, M.: Some aspects of resistance patients organism with chronic illness of respiratory system in conditions of salt mine (in Russian)	413
KHATIASCHVILY, N. M.: Karst cave microclimate effect on lipid metabolism in patients with neurocirculatory dystonia (NCD) (in Russian)	435	TARDY, János - HIROS, László: The aerosol-concentration of caves based on continuous measurements	640
KRASNOSTEIN, Arkadiy E.: Prospects of speleotherapy in Potash mine entries	254	TARDY, János: A complex study of the environmental impacts in Budapest's caves with particular respects to spe- cial climatic tests and the possibilities of med.	686
KRUSTEV, K. - BOJANOV, K. - DJAROVA, T. - MATEEV, G.: Comparative study of the adaptation to extreme conditions of a cave mountaineering (in Russian)	396	TARKHNISHVILI, I. D.: Karst cave microclimate effect in chronic non- specific lung diseases (in Russian)	423
KRUSTEV, K. - DJAROVA, T. - MATEEV, G.: The character of quick adaptation of the body at extreme cave conditions (in Russian)	399	TOROKHTIN, Alexander: Speleotherapy of patients suffering from asthma bronchiale concomitant with cardiovascular pathology	675
KRUSTEV, K. - DJAROVA, T. - MATEEV, G.: Attempt for assessment of exhaustion degree and changes in functional capacity of speleologists during the expedition "BU-56", Spain (in Russian)	401	TOROKHTIN, Alexander: Speleotherapy and prospects of its development	676
LEMKO, Ivan: Asthma bronchiale speleotherapy in Solotvino salt mines	676	TSIKARISHVILI, K. D.: Speleoclimate and its practical importance in the national economy (in Russian)	433
LEMKO, Olga: Bronchitis chronica speleotherapy peculiarities in Solotvino salt mines	684	TUEV, A. V. - VERIKHOVA, L. A. - NOKHRINA, L. M. - KRASNOSTEIN, M. A.: Experiences in curing patients with easier cases of chronic nonspecific sicknesses in Potash Pits (in Russian)	430
LYACH, V. - CHONKA, J.: Distance results of speleotherapy on the patients with bronchial asthma of the population of Trans- carpathian region (in Russian)	421	USHVERIDZE, G. A.: Results and prospects of speleotherapy in the Georgian Soviet Socialist Republic (in Russian)	588
LÉNÁRT, László - SOMOGYI, György - HAKL, József - HUNYADI, Ilona: Radon mapping in caves of Eastern Bükk region	620	VÉGH, Zsolt: Characterization of the climate of Baradla cave with measuring its carbon dioxide content systematically	627
MUCSI, János - HORVÁTH, Tibor: Care of asthmatic children in the Hospital cave in Tapolca	132		

#### Session B4

Techniques of cave exploration and touring

Technik der Höhlenforschung und Höhlensport

Les techniques de prospection et des visites des grottes

Técnica de descubrimiento y exploración de cuevas

Разведка пещер и техника лазания по пещерам

BIZUKIN, A. V. - NEMCHENKO, T. A. - USIKOV, D. A.: Research Sneznaja cave	684	SERAFOV, K. B.: The falling energy dampers prospecting for improving the safety of cave exploration	689
FICSOR, Lajos - MAJOROS, Zsuzsanna - PETHÖ, Gábor: VLF method for surveying caves	127	SNETKOV, Egeniy: Single steel rope technique	684
MIHEVC, Andrej: The remains of gears of the first explorers of Škocjanske Jame and Kačna Jama	673	VANDENBINNE, Roger: Localisation Electromagnétique en Surface de Deux Grottes de Belgique	67
McCLURG, David: Proposed standards for caving equipment and techniques	677	VJATCHIN, Andrej - REZVAN, Vladimir: Thirty years of soviet caving (in Russian)	593

Session B5

Impact of cave tours on cave conditions

Auswirkungen des Höhlenbesuchs auf den Zustand der Höhlen

L'impact des visites touristiques des grottes sur l'état des grottes

El papel de las excusiones en la vida de la cueva

Влияние экскурсий на состояние пещер

CRAVEN, Stephen A.: The Cango Caves of South Africa: has government control been beneficial?	156	HOLLAND, Ernst: Away with the wire	260
FRANTZ, Peri: Caves, conservation and children	677	KOVÁCS, Hajnal: Paradoxical consequences of the impact between man and cave	606
HARDWICK, Paul - GUNN, John: Cave management and conservation in Britain: An historical overview	196		

Session B6

Documentation of caves

Dokumentation der Höhlen

La documentation spéléologique

Documentación de las cuevas

документация пещер

BOSTED, Peter E. - TINSLEY, John C.: Documentation of caves and karst in Redwood Canyon Kings Canyon National Park, California, USA, with applications to sinkhole sedimentation	179	SCHÖNE, Tilo: Genauigkeit von Höhlenplänen	237
DOBROČHEV, Mladen: Computer-aided description of caves, based on conventional measurement	677	STÜMMER, Günter: EDV-gestütztes Höhlenverzeichnis in Österreich	545
HARDWICK, Paul - GUNN, John: The limestone cave resources of Great Britain	194	SZÉKELY, Kinga - WOJCIK, Zbigniew: Problems of history of geology	683
JANCARIK, Antonin: Computer processing and speleological and geological maps	675	TULIS, Ján: A representation of complicated caves systems (on an example of Stratenska cave) (in Russian)	457
KUCERA, Bohumil: System of registration of caves in the Czech Socialist Republik	681	VERESS, Márton - FUTO, János: Experiences of mapping of eroding karst cavities which were formed in current karst water zone	682
LÉNÁRT, László: Types of postage-stamps and picture-postcards containing cavemotives	312	VERESS, Márton - PÉNTEK, Kálmán: Kartographic representation of the extension of karstification	162
MAIS, Karl: Speidok-Austria, das Dokumentationssystem der Karst- und Höhlenkundl. Abt. des Naturhist. Museums in Wien und des Verbandes öst. Höhlenforscher	553	VUKOV, Péter: Der Esperanto in der Speleologie	509
PAS, van der, J. P.: Speleophilately	512	WANG, Xunyi: The longest Karst caves in China	487
SERAFIMOV, K. B.: Sport- technical description of vertical routes	689	WARILD, Alan: An Australian Topofil	680

Session B7

Human activities and the cave biota

Höhlenfauna und Einflüsse des Menschen

Le monde des êtres vivants des grottes et les activités humaines

El efecto de la actividad humana sobre la flora y fauna de las cuevas

Влияние деятельности человека на животный мир пещер

BERNASCONI, Reno: Thoughts about the hydrobioidea fauna of Hungary	679	GAREV, B. L.: Results of the cave fauna studies effected by an amateur biospeleological group from Pleven (in Russian)	460
FERGUSON, Lynn: Taxonomy and distribution of the Eumesocampa (Diplopoda: Campodeidae) of North America	680	GNASPINI NETTO, Pedro: Fauna associated with bat guano deposits from Brazilian caves (a comparison)	52
FERNOLENDT, Marius - VIRÁG, János - RADU, Ioan - PINTAI, Tamás: Biological considerations concerning the fluorescein dyeing of carstic waters	517	GRUIA, Lucian: The algal flora in Pestera Muierilor (District Gorj - Romania)	679
GABALDON CASASAYAS, Jesús E.: Aspectos topoclimáticos de la cova del masiet (Mont-rail: Tarragona) versus comportamiento estacional de petaloptila aliena Brunner	676	GRUIA, Lucian: Radiosynthesis - a new hypothesis on cave algae autotrophy	687

HOLSINGER, John R.: Preliminary zoogeographic analysis of five groups of Crustaceans from Anchialine caves in the West Indian region	25	PRIDE, Thomas E. - OGDEN, Albert E. - HARVEY, Michael J.: Biology and water quality of caves receiving urban runoff in Cookeville, Tennessee, USA	27
KANDOV, Ivo: Research of food structure of Chiroptera inhabiting caves with regard to their economic significance	677	PROUDLOVE, Graham: Cave dwelling fishes of the world	683
KNISS, V. A.: About the cave fauna of the South Urals: the results of a ten year biospeleological research (in Russian)	437	RAITSCHEV, Ivan M.: Studies on Rove Beetles (Coleoptera, Staphylinidae) in the caves in Bulgaria	58
KOSEL, Vladimir - MARTINEK, Vladislav: Summer synusie and distribution of the family Heleomyzidae (Insecta, Diptera) in a cave of the Western Carpathians	281	RAJCZY, M. - BUCZKO, K.: The development of the vegetation in lamp-lit areas of the cave Szemlő-hegyi-barlang, Budapest, Hungary	514
KOVÁTS, Nóra: How do bats respond to environmental factors?	112	RÁKOSY-TIGAN, Lenuta - GRUIA, Lucian - PLAMADA, Emanuel: Data on the lamp flora affecting the Ursilor Cave at Chiscau	679
LÉNÁRT, László - BALLA, Bélané: On the fluctuation of the number of the bats living in the Létrási-Vizes Cave (Bükk Mountains, Hungary) during the years 1975-1989	316	RÁKOSY-TIGAN, Lenuta - MOMEU, Laura - LÖRINCZI, Francisc: Investigations on the microflora in the Vadu Crisului Cave (Padurea Craiului Mts.) - Romania	678
MIOUGE, Nikolaj: Communities of troglobitic invertebrates in the caves of the West Transcaucasus and the Mountainous Crimea	678	T. BOLNER, Katalin: Results of bat-registration works in the cave of Pál-völgy	680
MIOUGE, Nikolaj: Biospeleological map of Mountainous Crimea and West Transcaucasus	678	TRAJANO, Eleonora: Preliminary study on the chemical communication in the troglobitic catfish, <i>Pimelodella kronei</i> (Ribeiro, 1907) from Southeastern Brazil	49
PERELADOV, Michail: Some aspects of distribution of fishes in the subaqueous caves near Kugitang-Tau Mountains	679	VÉGH, Zsolt: The problem of the lampflora in Baradla Cave	559
MARKIN, S.: Archeological and paleogeographical researches of the Altai Mousterian cave (Southern Siberia, USSR)	682	YAGER, Jill: The reproduction of Remipede Crustaceans	679

#### Session 88

Prehistoric men and the caves  
Prähistorischer Mensch und Höhlen  
L'homme préhistorique et les grottes  
El hombre prehistórico y las cuevas  
Доисторический человек и пещеры

ASPARUHOV, Milko: An attempt for elucidation of the medieval drawings - graffiti from North-West Bulgaria (in Russian)	344	MULAOMEROVIC, Jasminko: Rock drawings in Bosnia (part of Yugoslavia)	682
DEBENATH, André: L'occupation paleolithique du karst de Charente (France)	30	MULAOMEROVIC, Jasminko: Prehistoric men and caves of Malta	682
DEREYVANKO, A. - IVLEVA, N. - MARKIN, S.: Archeological and paleogeographical researches of the Altai Mousterian cave (Southern Siberia, USSR)	682	PETROCHILOU, Anna: Sculptures et gravures rupestres al'ile de Naxos depuis l'époque préhistorique jusque à nos jours	153
DUSHEVSKY, Vladislav: Determination of the rate of cave development based on archeological data (in Russian)	443	POULIANOS, Nickos: Further data on the lower middle pleistocene Petalona cave	683
FUCHS, Gerald: Höhlengrubungen in der Steiermark Ergebnisse neuer Forschungen und Probleme	6	RAITCHEV, Dimiter - RAIACHEV, George: Some climatic phenomena in the Yagodina cave used by eneolithic dwellers	327
GERGOV, Ventsislav: Prehistoric researches of the caves in midland North Bulgaria (in Russian)	340	SAIZ QUEVEDO, Luisa - FERNANDEZ SANDINO, Javier A. - FERNANDEZ IBÁÑEZ, Carmelo: Introducción al Estudio del Santuario Esquemático de la Caverna de "Peña Esquillas"	36
KITTEL, Erika - WOLLENIK, Franz: Sexualzeichen in Höhle und Fels	306	SHAHINYAN, S. M. - GEVORGIAN, A. A.: Cave dwellings with stone doors (in Russian)	440
LORDIKANIDZE, David O.: Environment of stone-aged people's habitation in the caves of Western Georgia (on the materials of the cave site Ortvala-Kide)	681	SHAHINYAN, S. M.: The "Xenophon dwellings" and their analogues in the basin of Lake Sevan (in Russian)	446
MARTINEZ DE CAÑAS, Jacinto J.: Consideraciones en torno a la cueva de Penches (Burgos) y sus representaciones parietales	245	STOEV, Alexej - GUERRASSIMOVA-TOMOVA, Vassilka - STOYTACHEV, Todor: Complexe de grottes pres du village Bajlovo, region de Sofia (Bulgarie) et son utilisation par l'homme	330
MUGLOVA, Penka - STOEV, Alexey: A projecting system with the functions of measuring time in the cave monastery at Derevny Krasen (in Russian)	337	STOYTACHEV, Todor - STOEV, Alexey - RADOSLAVOVA, Tsvetanka - STOYTACHEVA, Ulyana: Astronomical motives in rock art designs in Bulgarian caves (in Russian)	334
MULAOMEROVIC, Jasminko: The paleolithic of Middle Bosnia (Yugoslavia)	239	VENI, George: Geologic factors in the preservation and management of the Maya Naj Tunich Cave paintings, Peten, Guatemala	681

Session B9

Problems of protection of show caves

Schutz der Schauhöhlen

Les questions de la protection des grottes touristiques

Cuestiones sobre la protección de cuevas turísticas

Вопросы защиты туристических пещер

BACHINSKIY, Georgy: Cave protection and social ecology (in Russian)	449	PETRESCU, Mircea: Cave protection - a theoretical approach	683
GAÁL, László: Several remarks on the protection of karst based on the experience gained by the Slovak Speleolo- gical Society	294	SZUNYOGH, Gábor: Hierarchical system of cave fractures and its role in the prediction of cave-in hazards (in Russian)	648
KORZHIK, V. P. - RIDOUSH, B. T.: A "Fresh" cave "Zoloushka" assimilation problems (in Russian)	366	T. BOLNER, Katalin - TARDY, János - NÉMEDI, László: Evaluation of the environmental impacts in Buda- pest's caves on the basis of the study of the quality of dripping waters	634
KORZHIK, Vitaly - MINKEVICH, Irene: On speleoresources approach to study, mastering and protection of caves (in Russian)	452		

Session B10

Problems of subaquatic cave exploration

Probleme der Unterwasserhöhlenforschung

Les problèmes de la prospection subaquatique des grottes

Problemas de la exploración de cuevas aguáticas

Проблемы исследования подводных пещер

FRACHON, Jean-Claude: Apercu historique sur la plongée souterraine Française	519	MAXWELL, Charles: Underwater exploration of Dragon's Breath Lake (1987)	134
KISSELJOV, Vladimir - MINEKOV, Peter: Cave diving explorations of deep karst systems	683		

Session B11

Paleoflora and paleofauna

Paläozoologie und Paläobotanik in Höhlen

Les paléofaunes et paléoflores des grottes

La paleofauna y paleoflora de las cuevas

Палеоботаника и палеозоология пещер

GAREV, B. L.: Maastricht mesosaurus remains from the caves round the town of Pleven	462	MARTINEZ FLOREZ, Julio: Preliminary investigation of osseous remains found in the middle quaternary in the cavern of Santa Engracia - La Rioja (Spain)	684
HIR, János: Oldenburg-type vertebrate fauna from the Pongor cave (North Hungary, Bükk Mountains)	521		

Cave rescue

Höhlenrettung

Secours en Grotte

Salvamento en las Cuevas

FRACHON, Jean-Claude: Apercu historique sur les sauvetages speleologiques en France	526	SERAFIMOV, K. B.: Individual help to partner	688
REZVAN, Vladimir - KISELEV, Vladimir: Speleological events in the USSR in the years 1962-1988 (in Russian)	602		