

CONTENTS

Preface

Cave Resources and Environments

Comparative studies and zonality of karst and caves

The karstification process and hydrogeological features of the Mesozoic rocks in the karst of Croatia (Europe)

Mladen GARASIC (1)

Contact karst of Brkini hills on the Southern side of classical karst area kras in Slovenija

Andrej MIHEVC (5)

Glacier caves in South East Iceland

J.P. van der PAS (8)

Caves of Dolny Vrch plateau in south Slovakian karst

David HAVLICEK Ludek VLK (9)

Salt karst in Zagros fold belt (SE Iran)

Pavel BOSAK (9)

Тектоническая зональность карста

Клара ГОРБУНОВА Николай МАКСИМОВИЧ (10)

Selected karst features mapping in Virginia, U.S.A.

David A. HUBBARD (11)

Karst-geomorphology of Yucatan cave

Rosario RUGGIERI (14)

The Gregory karst and caves, northern territory, Australia

John R. DUNKLEY (17)

Features of geologic-ecologic environment and cave patterns

LU Yaoru (19)

New considerations on classification of karst caves

ZHANG Ren ZHU Xuewen (21)

The characteristics of cave development in the karst gorge district of the Guizhou plateau

YANG Mingde ZHANG Yingjun (23)

Characteristics of formation and preservation mechanisms of cave systems in the Hunjiang river valley,
Jilin, China

CHEN Honghan ZHANG Yongxiang CAO Yilin (25)

Primary characteristics of caves of Shandong Province, China

ZHAO Jian (27)

Karst cavern distribution and characteristics in the area bordering Shanxi, Shaanxi and Inner Mongolia

ZHANG Yuchua TIAN Zukai LIU Qun (30)

The law of the development of karst caves in the region along the Yangtze river in Anhui Province

SUN Yufei HU Xiaomeng (31)

The karst of the Yanziping syncline, cave genesis and hydrogeology (Hefeng County, Hubei Province, China)

The "Donghe 92" Speleological team (34)

Development mechanism of karst geomorphology in Shilin area Yunnan, P.R. China

LIAO Yizhong (36)

Classification of caves in Danxia landform regions of China

HUANG Jin SU Zeling HUANG Ruihong (38)

The lava caves of Wudalianchi, Heilongjiang Province

WANG Xiaoguang ZHANG Yiaode JIAO Yu (40)

The reflection of neotectonic movement upon caves of Guizhou	
LI Po	(41)
Sea caves and oceanography	
Lauro BARCELLOS Judith CORTESÃO	(41)
A comparison of karst in Yugoslavia and China	
Marjorie M. SWEETING	(41)
Caves of Central Switzerland	
Guido BLASER	(41)
Cave deposits, evolution of cave system and global climate change	
Stable isotope studies of speleothems from Rat Nest cave, Alberta, Canada	
C.J. Yonge W.D. MACDONALD	(41)
An approach to the evolution of Yaolin cave and global climatic changes	
LIN Junshu ZHAO Shusen HUANG Cixuan ZHANG Yaoguang	(42)
The development process of Peking Man cave and global climatic changes	
HUANG Peihua	(43)
The speleogenetic environment and evolution of Zhijin cave	
ZHU Wenxiao LI Po XIONG Kangning	(45)
The formation and evolution of Nandong underground river system, Yunnan	
ZHU Xuewen ZHANG Ren	(48)
A tentative study on subterranean terraces of the upper Moyangjiang river, Guangdong, China	
HUANG Ruihong	(51)
Two peculiar karst forms of the gypsum outcrop between Zapala and Las Lajas (Neuquen, Argentina)(1)	
P. FORTI G. COSTA V. OUTES G. RE S. BARREDO	(54)
Speleochronological approach to some coastal caves from "Cap Vermell" area in Mallorca Island (Spain)	
Joaquin GINES Angel GINES	(56)
Deep karst periods and types in the Tengxian and Peixian coal bearing basin	
LI Yichang HAN Baoping	(59)
Study on paleokarst breccias from Gaobazhou dam site, China	
Xu Weiya	(61)
The role of condensation-corrosion in the development of gypsum karst: The case of the Cueva del Agua (Soraas-Spain) (1)	
J.M. CALAFORRA A. DELL'AGLIO P. FORTI	(63)
Stagnant water speleotems	
Jose Ayrton LABEGALINI	(66)
Thin-water effects on speleothems in caves of Guizhou, China	
CHENG Xing ZHANG Yingjun	(68)
Some observations on the genesis of rimstone gourls and dams	
Brain FINLAYSON LI Shu	(70)
A concise review of the cave mineralogy of Southern Africa	
J.E.J. MARTINI	(72)
Speleominerals of Japanese Islands	
KASHIMA Naruhiko	(75)
Geochemistry of the the spelean phosphate minerals from China, Korea and Japan	
KASHIMA Naruhiko	(76)
Some minerals in karst caves	
LI Jiaju CHEN Yisong ZHANG Shouyue	(78)
Speleogenesis in aeolian calcarenite in Southern Australia	
Susan WHITE	(78)

Calcite crystals from the Rhar Sidi Bakou cave (Bibans, Northern Algeria)	
Yu. DUBLYANSKY B. COLLIGNON	(79)
Nucleation and its part in calcite deposition	
LI Shu Mark ELLAWAY Brain FINLAYSON	(81)
Grain size sediments in modern subsurface river in the Wulichong region, Yunnan Province	
CHEN Xiaoping WU Wenqing	(83)
The causes of composite morphology of speleothems	
YANG Hankui	(85)
Nueva formacion espeleologica: Dibujos de circulos Formados por goteo en la gran caverna de Santo Tomas	
Antonio NUÑEZ JIMENEZ	(85)
The formation of Shihua cave of Beijing and its landform condition	
LIU Xiang YANG Zhenfu	(86)
The formation of Benxi water cave, Liaoning, China	
PAN Jianmin GAO Shanghua, WEI Haipo	(86)
Reaction mechanisms of water-rock interaction	
Numerical modeling of mineral dissolution kinetics processes in karst aquifers	
ZHANG Yongxiang CHEN Honghan REN Zhongyu	(87)
Hydrochemistry of some cave areas in China—preliminary results	
JIN Yuzhang	(89)
Water quality in the karstic regions of Central China	
B. COLLIGNON JIN Yuzhang	(90)
Karst hydrogeology and water chemistry of Wulichong underground drainage system in Wulichong area, Yunnan Province, China	
SONG Linhua LIU Hong DU Lihua	(92)
Isochemical mapping: The implications of spatial geochemical variations on karst aquifers	
George VENI & Associates	(95)
Preliminary data on the chemical erosion in gypsum karst: 1—The Sorbas region (Spain) (1)	
J.M. CALAFORRA A. DELL'AGLIO P. FORTI	(97)
The role of sodium chloride in speleogenesis beneath the Nullarbor Plain, Australia	
Julia M. JAMES Andrew P. SPATE	(99)
Mechanical denudation of the formation of karst caves	
SONG Huanrong HUANG Shangyu	(102)
Study of mechanisms of oilfield karst	
HAN Baoping	(104)
Analysis for the origin mechanism of large cave systems in Qingjiang river reaches of Western Hubei, China	
SHEN Jifang WANG Jungwei YU Qingchun GAO Wenxin	(107)
Fissure networks and karst caves	
XU Ruichun YU Qianchun SHI Baixin	(109)
Cave morphology in free-flow & artesian aquifers	
Geoge VENI & Associates	(112)
Flow action in the formation and development of caves	
SHI Mengxiong	(114)
Speleobiota, cave archaeology and paleontology	
Preliminary research of formation characteristics of speleothems in Zhijin cave, Guizhou, China	
LI Jingyang RONG Kunfang AN Yuguo HE Fusheng	(114)
Blue-green algae and primary lithogenesis at Zhijin cave, Guizhou	
HE Fusheng AN Yuguo LI Jingyang RONG Kunfang	(116)

Cave fauna from Yucatan, Mexico	
Jose G. PALACIOS-VARGAS Rosario RUGGERI.....	(118)
Biogeographic patterns of North American subterranean amphipods in the genus <i>Stygobromus</i> (Crangonyctidae)	
John R. HOLSINGER	(118)
A synopsis of cavefishes from China	
CHEN Yinrui YANG Junxing	(121)
Species and origin of cave-dwelling sinocyclocheilus fishes	
CHEN Yinrui YANG Junxing	(123)
The cavefishes from Duan, Guangxi, China with comments on their adaptations to cave habitats	
YANG Junxing CHEN Yinrui	(124)
The cavefishes from Jiuxiang limestone cave of Yunnan, China with reference to the character evolutions	
YANG Junxing CHEN Yinrui	(126)
Diplopoda from Yunnan caves II. Contribution to the study of a new cavernous taxon of the nematophoran millipeds (Diplopoda: Cocolocheta: Callipodida)	
ZHANG Chongzhou	(128)
A new Troglotic Millipede, <i>Podoglyphiulus sinensis</i> , sp. nov. from Guizhou Province (Diplopoda, Spirostreptida, Cambalopsidae)	
MENG Wenxin ZHANG Chongzhou	(130)
Preliminary report on the excavation of Panxian Dadong. A paleolithic cave-site in Guizhou Province	
SI Xinqiang LIU Jun ZHANG Hangan YUAN Chengwu	(131)
Discovery of Nanjing Man and its significance	
XU Qingqi	(131)
Use of Central California limestone caves by prehistoric peoples	
Jerald J. JOHNSON	(131)
La grotte prehistorique de Nabaa el Mghara (Liban)	
Sami KARKABI.....	(134)
Anciens greques installations hydrauliques dans la caverne Agia Heleni ou Kryoneri Zygou Kavallas	
A. PETROCHILOU	(138)
Skoteini cave at Tharrounia, Greece. A model for seasonal occupation during the Neolithic period	
Adamantios SAMPSON	(140)
The TEKAX '90 Project and the use of the caves by the Maya	
Washington SIMÕES.....	(143)
Guia para el estudio del arte rupestre de Cuba	
Antonio NUÑEZ JIMENEZ	(146)
Vertebrate remains of cave deposits of Kyukyu Archipelago, Japan	
HASEGAWA Yoshikazu	(146)
An understanding of karstic systems provided by animal communities	
Janine GIBERT	(146)
A block race of the cave amphibian <i>Proteus</i>	
Boris SKET	(146)
The hydrobiid snails of subterranean waters and their systematics	
Reno BERNASCONI.....	(146)
Karst water and cave mineral resources, quality of cave environment	
The stochastic simulation of karstic water resources of an underground river system in the southern part of Puding County, Guizhou Province	
ZHAN Bingshan XU Chao.....	(147)
Occurrence of karst conduits and their hydrogeological role in the Hongyuan coal field	
WAN Jikuan	(149)

An approach to the characteristics and controlling factors of paleokarst in gas reservoir rocks of the Luzhou area, Southern Sichuan	
YAN Qibin FU Xiaowen	(151)
CO ₂ in soil and air in cave environments	
ZHANG Shouyue JIN Yuzhang	(153)
Khao Bin cave, Thailand and the problem of enhanced levels of carbon dioxide in tropical tourist caves	
John, R. DUNKLEY	(155)
Antropogene hazards of the quality of cave environment	
FODOR Istvan	(157)
Environmental monitoring and evaluation on Zhijin cave of Guizhou	
LI Po ZHU Wenxiao	(158)
An evaluation of tourism environmental quality of Tianquan cave in Southern Sichuan Province	
ZHANG Daquan XU Maoqi ZHANG Anming SONG Mengqiang	(160)
Development conditions of stone flowers in Shihua cave and the cave environmental protection	
YANG Zenfu	(162)
The exploitation and conservation of Stone Flower cave, Beijing	
LI Tiejing	(163)
Variations saisonnieres du CO ₂ de l'air de deux grottes du Jura meridional (France)	
C. EK A. SBAI	(165)
Hydrological conditions in the Zhunger coal basin and its eastern region, Inner Mongolia, China	
ZHANG Yuehua LIU Sikai	(165)
Les aquiferes karstiques des monts de Tlemcen (Algerie): Ressource en eau et exploitation	
B. COLLIGNON	(166)
Karst water in the southwest border of Bao-bo plain	
Quang Tung NGUYEN	(166)
Contamination and self-purification processes at a fractured limestone site recharged with secondary effluent	
Florian MALARO	(166)
Groundwater invertebrate communities associated with a contaminated karst aquifer	
Florian MALARO	(166)
Utilization of Cave, Prediction and Treatment of Natural Hazards in Karst Area	
Prediction of caves and treatment of karst collapse, desertification	
Research on catastrophe theory of collapse in the cavitation	
DUAN Guangjie ZHOU Pinggen	(167)
Evaluation of cave activity for use in karst forecasting	
LU Yaoru	(169)
Sinkhole collapses and gypsum karst in Cambrian platform of East Siberia	
Adolfo ERASO Yuri B. TRZHTSINSKIJ	(171)
Основные критерия оценки опасности карста	
В.М. КУТЕПОВ И.А. КОЖЕВНИКОВА Н.Г. АНИСИМОВА	(174)
Prediction model for buried karst Caves in the Gcheyan dam district	
YU Qingchun SHI Buoxun HANG Jixin XU Ruichun	(176)
Collapsed breccia columns in karst water-bearing coal mine fields in North China	
YU Pei	(178)
Subsidence and its treatment in karst coal mines in China	
LI Jinkai NIU Jianli LIU Qisheng LI Gongyu	(180)
Collapse induced by underground coal mining	
HAN Baoping XIE Keijun GAN Zhijie	(182)

The causes, prevention and treatment of surface subsidence in the Fankou mine field	
QUYANG Shiyuan.....	(184)
A study of environmental disasters in karst regions of Southwest China	
LIN Junshu FANG Jinfu ZHANG Yaoguang	(186)
Cave climate and speleotherapy	
Food preparation activities and the microclimate within Mammoth cave	
L. Michael TRAPASSO	(188)
Aerosol study in the Kungur ice cave (Urals, Russia)	
A. PASHCHENKO Yu. DUBLYANSKY V. ANDREICHUK	(190)
Histoplasmosis in the Cape Province of South Africa	
S.A. CRAVEN	(193)
Histoplasmosis in South Africa—an update	
C.N. YOUNG S.A. CRAVEN	(194)
Эффективность спелеотерапии в условиях микроклимата калийных и наземных спелеокамер	
А.В. ТУЕВ Л.А. ВЕРИХОВА Т.А. ЖАДОВА Л.Н. НОХРИНА Т.А. ЛЕОНТЬЕВА Г.З. ФАЙНБУРГ.....	(197)
The problems of utilization of the potash mine underground space for speleotherapy	
A.E. KRASNOSTEIN L.M. PAPULOV G.Z. FAINBURG Ju. N. PADERIN A.S. NIKOLAYEV.....	(200)
The experience of utilization of the potash mine climate for speleoagronomy	
A.E. KRASNOSTEIN L.M. PAPULOV G.Z. FAINBURG Ju. N. PADERIN V.M. ZELENIN	(200)
Cave resources, protection and management of show caves	
A world wide "Network" on cave protection and management	
John WATSON Julia JAMES	(201)
Protection to the speleological patrimony in Brazil Latin America and Caribbean Islands	
Clayton F. LINO.....	(203)
Seven years of cave restoration at Carlsbad Caverns National Park in the United States of America	
S.M. ECKLUND D.H. ECKLUND.....	(205)
Organization of a Volunteer Cave Restoration Project in the United States of America	
D.H. ECKLUND S.M. ECKLUND.....	(208)
Appraisal of cave resources with fuzzy sets	
CHEN Shicai	(210)
Some main problems in cave tourist exploitation	
XU Weiya WANG Dongpei HU Guanghua XIE Shouyi JIANG Ping	(211)
Developmental characteristics and exploitation of Benxi water cave	
PAN Jianming QIAO Xiquan CHEN Shicai	(213)
Speleotour in China	
ZHANG Shouyue	(215)
Preliminary study on karst scenic resources of Nagong cave and underground river	
ZHOU Chengjie	(217)
The political changes in the Central Europe and their impact on the Postojnska jama visit	
Andrej MIHEVC.....	(218)
Applied speleological characterization: the Brazilian Project "VIDA"	
Rui Campos PEREZ	(219)
Speleological heritage in Brazil: The basic available tools for its protection, characterization and management	
Rui Campos PEREZ	(220)
Las cuevas protegidas de Cuba	
Angel Graña GONZALEZ.....	(220)
Cave management classification usage in Australia	
Nicholas WHITE	(220)

Las cuevas del Rio Paranã y los incendios florestales	
Raquel MILANO	(220)
Cuevas y explotacion economica del calcario en Brasil	
Consolacion UDRY	(221)
Las cuevas de Bonito y el turismo	
Eza JACQUES MONTEIRO LEITE Judith CORTESÃO	(221)
Cave resources of Xundian County, Yunnan	
MA Raoxuan LI Guangfeng ZHANG Xinli	(221)
Silver fox: A karst cave near Beijing	
BI Fengxiang	(222)
Jenolan caves reserve trust	
Stephen REILLY	(222)
Documentation, Techniques and Equipment	
Corrosion model test in Ordovician limestone of Zhaogezhuang coal mine	
SHI Mengxiang	(223)
An experimental study on collecting ¹⁴ C samples in natural water by precipitation method	
YE Xiangqing	(224)
Groundwater tracing in Wulichong subsurface drainage system Mengzi County, Yunnan Province	
SONG Linhua HE Yueben FENG Yan	(227)
Acoustic sounding for concealed caves in karst areas	
QI Henian HE Faliang	(230)
Specialized cave photography	
Jose Ayrton LABEGALINI	(233)
Australian karst index database demonstration	
Peter MATTHEWS	(235)
Grand caves of China	
ZHANG Shouyue	(236)
Zhaidong / Gandong. The deepest cave system explored in China (Hefeng County, Hubei Province, China)	
The "DONGHE 92" speleological team	(237)
An inquiry about the characteristics and laws of the development of the Mochong cave group of Duyun, Guizhou Province	
CHEN Jiangeng	(239)
On chinese-foreign joint cave expeditoins of IKG	
WANG Xunyi	(241)
Present-day knowledge of the Luo Han Du cave (Southern China-Guangxi)	
R. ZORZIN S. MELOTTI	(242)
The contributions of Xu Xiake to speleology	
ZHANG Yingjun	(246)
Speleophilately: 15 years later	
J.P. van der PAS	(248)
Sociedad Espeleologica de Cuba vision general de la espeleologia y carsologia de Cuba	
Antonio NUÑEZ JIMENEZ Roberto Gutierrez DOMECH	(248)
La plus profonde grotte perte de la Turquie:Cukuprinar (-1225 m. Anamur-ICEL) et al connexion probable avec la source vaclusienne de DUDEN	
Temucin AYGEN	(248)
Wangtian cave	
CHEN Shicai	(249)

A brief introduction to Kongshan white cloud cavern in Lincheng County, Hebei Province

ZHANG Yuchua TIAN Zukai LIU Qunì (249)

Development characters of Yulong cave in Lichuan, Western Hubei Province

SHEN Jifang GAO Wenxin (249)

The development of a photomonitoring project in Lava Beds National Monument, CA, USA

William FRANTZ A. Peri FRANTZ (250)

Effective collaboration between speleologists and the Underground Hydrobiology and Ecology Laboratory
(Villeurbanne, France)

Janine GIBERT (250)

International data storage and transfer

Peter MATTHEWS (250)