

- Complex speleological exploration of Kapova Cave (Shulgantash) as basis for protection of its unique paleolithic painting. Y.S. Lyahnizkiy, A.A. Yushko, O.A. Minnikov, O.J. Chervyazova. 1168
- Karst and geodiversity initiatives in NSW, Australia. Stephen F. Meehan. 1173
- Baatara Pothole site: Overview and development perspectives. Marc Metni, Johnny Tawk. 1179
- Kassarat Cave – Antelias: Catchment works hazard assessment. Marc Metni, Sami Karkabi, Issam Boujawdeh, Rena Karanouh, Maia Sarrouf. 1185
- Robber Baron: Restoring an urban cave preserve. Joseph N. Mitchell, Linda K. Palit. 1191
- Monitoring of microbial populations in Kartchner Caverns State Park – a cost-effective cave management and outreach strategy. Julie W. Neilson, Luisa A. Ikner, Robert R. Casavant, Rickard S. Toomey, Ginger Nolan, Raina M. Maier, Eric Cook. 1197
- Cave and karst management in Great Smoky Mountains National Park. Daniel C. Nolfi. 1198
- The guides of Venezuela's Guacharo Cave: A historical and ethnographic study of local's contribution to its promotion, exploration, and conservation. María Alejandra, Pérez, Govinda Galindo. 1202
- Bold new resource management program at Timpanogos Cave National Monument, a National Park Service centennial strategy. Camille Pulham, Andy Armstrong. 1208
- Urbanization-induced trends in spring discharge from a karstic aquifer – Barton Springs, Austin, Texas, USA. John M. Sharp Jr, Leslie E. Llado, Trevor J. Budge. 1211
- Sedimentology of particulate accumulation and its remediation, Skull Ice Cave, Lava Beds National Monument, California, U.S.A. John C. Tinsley III, Kenneth Miller, Robert A. Johnson. 1217
- Relighting Mammoth Cave's New Entrance: Improving visitor experience, reducing exotic plant growth, and easing maintenance. Rickard S. Toomey, Richard A. Olson, Steve Kovar, Mike Adams, Robert H. Ward. 1223
- Mammoth Cave International Center for Science and Learning. Rickard S. Toomey, III, Shannon R. Trimboli, Robert H. Ward, Mike Adams, Blaine Ferrell. 1229
- Save the Hole World campaign – cave protection in the European Parliament. Baerbel Vogel, Christiane Grebe. 1233
- Prototype site for integrated speleological research: La Cueva de las Barrancas. Val Hildreth-Werker, Jim C. Werker, Penelope J. Boston. 1238
- Speleothem repair: Rehang large broken stalactites. Jim C. Werker, Val Hildreth-Werker. 1246
- Hydro-electric power proposal, Iratalaro-Paitchau Karst, Timor-Leste. Susan White, Nicholas White, Greg Middleton. 1253
- Fungus and cave management. Nicholas White. 1260
- A comparative cave climate study in southeastern Arizona – partnerships in cave management and climate change modeling. Steve Willsey, Robert Casavant, Rick Toomey, Jerry Trout, Ginger Nolan. 1266
- Cave conservancy management. John M. Wilson, Diane Cousineau. 1267
- Contributed Papers in the Biological Sciences** 1275
- Hot caves record in Mexico. Saúl Aguilar, Ada Ruiz, Juan Morales-Malacara. 1277
- Epikarst microbial assemblages in Padurea Craiului Mountains (NW Romania). Traian Brad, Adriana Bica, Ioana Meleg, Oana Moldovan. 1279
- Guanophile ecosystem of an urban cave polluted with raw sewage. Greg Brick. 1280
- Description of the biota on a representative sample of the systems of karst (Guanentina Region and Vélez Province) Santander – Colombia. Diego Casallas-Pabón, Mario Andrés Murcia López, Yaneth Muñoz-Saba. 1281
- Preliminary report on the cave Diplura of Colorado (Hexapoda: Diplura: Campodeidae). Lynn M. Ferguson. 1283
- Development and application of a database for the subterranean amphipod crustacean genera *Stygobromus* and *Batrurus*. John R. Holsinger, Justin Shafer, Grace Schulte. 1286
- The cave fauna of Texas. Jean K. Krejca, James R. Reddell, George Veni. 1290
- White-nose syndrome in hibernating bats: Are these affected bats the next "canary in the mine"? Thomas H. Kunz, David S. Blehert, Paul M. Cryan, Jeremy T.H. Coleman, Alan Hicks, Merlin D. Tuttle. 1291
- Effects of incubation conditions on quantification of chemoheterotrophic bacteria from caves. Kathleen H. Lavoie, Diana E. Northup, Jessica R. Snider, Nwamaka A. Nwagbologu. 1292
- Invertebrate colonization and deposition rates of guano in a man-made bat cave, the Chiroptorium, Texas, USA. Kathleen H. Lavoie, Diana E. Northup. 1297
- Effects of missing legs on distribution and jumping behavior in the cave cricket, *Hadenoecus subterraneus*. Kathleen H.

- Lavoie, Mohammed Chandoo, Suganthi Thirunavukarasu, Utsave Pandey, Elizabeth Lavoie, Kurt Helf. 1302
Species limits, phylogenetics, and conservation of *Neoleptoneta* spiders in Texas caves. Joel Ledford, Pierre Paquin, Charles Griswold. 1307
Untangling the webs in California's caves: The biogeography and systematics of the cave spider genus *Usofila*. Joel Ledford, Charles Griswold, Rosemary Gillespie. 1308
Zoogeography and evolution of the subterranean asellid isopods of North America. Julian J. Lewis. 1309
Structure characterization of the arthropod fauna community in cave of "The Rascadero," Santander, Columbia. Mario Andrés Murcia López, Diego Casallas-Pabón, Yaneth Muñoz-Saba. 1315
Small-scale spatial distribution of aquatic fauna in caves from northwestern Romania (eastern Europe). Ioana Nicoleta Meleg, Oana Teodora Moldovan, Sanda Iepure, Traian Brad. 1316
Ecological studies in interstitial habitats of Romanian Carpathians (eastern Europe). Oana Teodora Moldovan. 1317
Energy flow in the caves with emphasis in its arthropofauna with special reference to (Santander) Colombian caves. Yaneth Muñoz-Saba, Ligia Rosario Benavides-Silva, Manuel Antonio Hoyos-Rodríguez, Mario Andrés Murcia López, Diego Casallas-Pabón. 1318
Colombian bats from the caves. Yaneth Muñoz-Saba, Manuel Antonio Hoyos-Rodríguez, Diego Casallas-Pabón. 1320
Biospeleological provinces in Columbia. Yaneth Muñoz-Saba, Luís Guillermo Baptiste, Danilo Salas. 1321
Methods for counting cave crickets. G. Robert Myers III. 1322
Review and assessment of known cavernicoles and rare epigean biology of karst and caves, Great Smoky Mountains National Park. Daniel C. Nolfi. 1323
From cryophily to troglomorphy: Morphological and molecular evidence for the evolution towards troglomorphy in three different lineages of the genus *Cicurina* (Araneae: *Dictynidae*). Pierre Paquin, Nadine Dupérré. 1329
Cave Myotis (*Myotis velifer incautus*) roost monitoring and protection on Fort Hood Army Installation, Texas, USA. Charles E. Pekins. 1330
New studies of *Speoplatyrrhinus poulsoni* (Pisces: Amblyopsidae). Thomas L. Poulsom. 1337
Field metrics for cave stream bio-integrity. Poulsom, Thomas L. 1343
Visual observations of the macroscopic life in Puerto Rican caves. Ronald T. Richards 1349
Vertebrate species in underground features of Arizona. Thomas R. Strong. 1356
Cave communities in Missouri – A comparison of nutrient rich and nutrient poor settings. Michael Sutton. 1361
Spatial and temporal distribution of terrestrial macroinvertebrates in Lehman Caves, a tourist cave in Great Basin National Park, Nevada, USA. Steven J. Taylor, Jean K. Krejca, Michael E. Slay. 1367

Contributed Papers in Conservation and Management 1369

- Documentation of caves and karst in Western Australia. Ross Anderson. 1371
Preliminary studies on soil erosion intensity grading in southwest karst area, China. Jianhua Cao, Jiang Zhongcheng, Yang Desheng, Pei Jianguo, Yang Hui, Luo Weiqun. 1372
Research priorities for underground ecosystems in Colombia. Brigitte Luís Guillermo Baptiste, Yaneth Muñoz-Saba, Danilo Salas, Manuel Antonio Hoyos-Rodríguez. 1380
A cave survey for research and tourist cave management. Julia M. James, David J. Martin, Gregory M. Tunnoch, Alan T. Warild. 1381
Cave and karst resource inventory and monitoring on the Tongass National Forest, southeast Alaska, USA. Johanna L. Kovarik, 1388
Karst cave system types and their protection in China. Yaoru Lu, Keqiang He. 1375

Contributed Papers in the Earth Sciences 1399

- Karst cave features of Mongolia. E. Avirmed. 1401
Thermal sedimentation in caves: A note. Giovanni Badino. 1402
The sound of natural caves. Giovanni Badino. Roberto Chignola. 1403
The Cueva de los Cristales micrometeorology. Giovanni Badino. 1407
Decline of cave ice – a case study from the Austrian Alps (Europe) based on 416 years of observation. Michael Behm, Veronika Dittes, Robert Greilinger, Helga Hartmann, Lukas Plan, Dieter Sulzbacher. 1413

- Effects of surface morphologies on flow behavior in karst conduits. Aaron Bird, Gregory S. Springer, Rachel F. Bosch, Rane L. Curl. 1417
- Preliminary water quality and boundary redefinition of the Scott Hollow Drainage Basin, Appalachian Plateau, USA. Melisa R. Bishop, Ira D. Sasowsky, William K. Jones. 1422
- Flow characterization from epikarst and shallow bedrock springs across a range of hydrologic conditions, Savoy Experimental Watershed, Ozark Region, U.S. Van Brahana, Ralph Davis, Phillip D. Hays, Kenneth F. Steele. 1428
- Fluorescence characterization of karst aquifers. Terri Brown, Sid Jones, Larry McKay. 1429
- Atrazine contamination and suspended sediment transport within Logsdon River, Mammoth Cave, Kentucky, USA. Julie E. Schenck Brown, Stephen T. Kenworthy. 1435
- Tiankengs in the karst of China. Weihai Chen, Zhu Xuewen. 1440
- Delineating spring flow systems in the Texas Hill Country, USA. Ali H. Chowdhury, Chad Norris. 1446
- Karst microclimate monitoring in the northern Alps, Austria: Initial results. Aaron Curtis. 1452
- Geomorphological evolution and digital mapping of the Ksiromero Region, western Greece. Miljana Golubovic Deligianni, Kosmas Pavlopoulos, George Veni, Issaak Parcharidis. 1458
- Morphological relationships between erratic boulders and associated bedrock limestone fins or “rock comets”, Madre de Dios Archipelago, Chile. Joel Despain, Richard Maire, Stephan Jalliet. 1463
- Extreme increase of CO₂ in Belgian Caves. Camille Ek, Jean Godissart. 1467
- Overview of the non-karst caves in Hungary. István Eszterhás, George Szentes. 1474
- From the Plains of Abraham to Dodo Canyon: Remarkable dolomite karst in permafrost in the MacKenzie Mountains, Northwest Territories, Canada. Derek Ford. 1481
- New Research in the South Nahanni Karst, MacKenzie Mountains, Northwest Territories, Canada. Derek Ford, Stephen Worthington. 1482
- DNA analysis of fecal bacteria to augment an epikarst dye trace study at Crumps Cave, Kentucky, USA. Rick Fowler, Brian Ham, Chris Groves, Carl Bolster. 1483
- Dating a biblical lady: An unroofed salt cave gives birth to Lot's wife. Amos Frumkin. 1490
- Geologic and hydrogeologic conditions in speleogenesis of the longest and deepest caves in karst of Croatia. Mladen Garašić, Davor Garašić. 1495
- Problems with caverns which were found on the route of the highways in Croatian karst region (Dinaric Karst). Mladen Garašić. 1500
- Dye tracing oil and gas drilling fluid migration through karst terrain: A pilot study to determine potential impacts to critical groundwater supplies in southeast New Mexico, USA. James R. Goodbar. 1507
- Cave development influenced by hydrocarbon oxidation: An example from the Polish Tatra Mts. Michał Gradziński, Marek Duliński, Helena Hercman, Michał Żywiecki, Janusz Baryła. 1511
- Study of temperature and airflow in the Schellenberger Ice Cave (Berchtesgadener Limestone Alps, Germany). C. Grebe, J. Ringeis, A. Pflitsch. 1512
- Differentiating karstic and pseudokarstic caves and closed depressions in the American Southwest, USA. William R. Halliday. 1513
- Using conservative and biological tracers to better understand the transport of agricultural contaminants from soil water through the epikarstic zone. Brian Ham, Rick Fowler, Chris Groves, Carl Bolster. 1519
- The karst hydrogeochemical features in the catchment of Baiyandong underground river, Baojing, Hunan, China. Shiyi He, Pei Jianguo, Xie Yunqiu. 1524
- Recent observations in a remarkably dynamic, sulfide-rich, hypogenic cave in southern Mexico. Louise D. Hose. 1525
- The big cave and chambers in Poyue Underground River drainage in south China and its controlling factors. Huang Baojian, Zhang Yuanhai, Chen Weihai. 1531
- Twenty years of monitoring, tests and experiments in the Milandre Cave, Jura Mountains, Switzerland: Inputs for karst hydrogeology. Pierre-Yves Jeannin. 1536
- Impact assessment of a tunnel on two karst springs, Flims, Switzerland. Pierre-Yves Jeannin, Philipp Häuselmann, Eric Weber, Andres Wildberger. 1537
- Tracing groundwater flowpaths in the Edwards Aquifer recharge zone, Panther Springs Creek Basin, northern Bexar County, Texas, USA. Steve Johnson, Geary Schindel, George Veni. 1538
- Urban karst drainage problems in the Ensor Sink – Tires-to-Spare System, Cookeville, Tennessee, USA Sidney W. Jones,

- Richard C. Finch. 1539
The importance of karst aquifers to public and domestic water supplies in the United States. William K. Jones. 1544
Some evidence of hydrothermal speleogenesis in the Akka Limestone, northern Kitakami Massif, Japan. Naruhiko Kashima, Hidesato Kuwahara. 1548
Evolution of the Biš Nik Cave environment (Krakow-Wielun Upland, southern Poland) Katarzyna Kasprowska, Viacheslav Andreychouk. 1551
Morphogenetic classification of talus caves based on geometry of clasts and sequential development. Ernst H. Kastning. 1555
The sinkholes of Layla Lakes: Saudi Arabia and their singular sub-lacustrine gypsum tufa. Stephan Kempe, Heiko Dirks, Ingo Bauer, Randolph Rausch. 1556
Geomicrobiology and hydrology of pool precipitates in the Guadalupe Mountains, New Mexico, USA. Ara Kooser, Laura Crossey, Diana Northup, Mike Spilde, Leslie Melim. 1562
Conduit flow process (CFP) for MODFLOW-2005. Eve L. Kuniansky, W. Barclay Shoemaker. 1568
Anthropogenic sinkholes in the Delaware Basin region of west Texas and southeastern New Mexico, USA. Lewis Land. 1575
Carbonate dissolution in cold water: *In situ* experiments and the consequences for subglacial karstification. Lauritzen, Stein-Erik. 1581
Fracture control of caves in marble: Earthquake mediated? Examples from Scandinavia. Stein-Erik Lauritzen. 1582
Natural history of Clay Cave, Napa County, California. Matt Leissring, Rolf A. Aalbu, Bruce W. Rogers. 1583
Unusual talus-fissure caves in Tuolumne County, California. Matthew Leissring, William Frantz, Bruce W. Rogers. 1584
Contaminant transport in two central Missouri karst recharge areas. R.N. Lerch. 1585
Recording a flood event inside the Water Sinks Cave. Philip C. Lucas. 1593
Stratigraphic and structural control of cave development in Sinkhole Flat, Eddy County, New Mexico, USA. Lucas C. Middleton, Raymond G. Nance, Kevin Stafford. 1597
Collapse dolines of the Divača Karst, Kras Plateau, Slovenia. Andrej Mihevc. 1600
Bellholes and bellbasins: Biogenic (bat) cave features of Puerto Rico and the neotropics. Thomas E. Miller, Maria Figueroa-Mulet. 1605
Morphology of solution-dominated vs. clastic-dominated cave passages in the Caves Branch Karst, Belize. Thomas E. Miller. 1612
Airflow and CO₂ in Robber Baron Cave. Joseph N. Mitchell, Evelyn J. Mitchell. 1613
Monitoring dripwater chemistry in El Refugio Cave (southern Spain) as a contribution to understanding infiltration and speleogenetic processes in karst aquifers. M. Mudarra, B. Andreo, I.J. Fairchild, J.A. Barbera, I. Vadillo. 1620
A major unmapped fault in Ganter Cave, and possible geomorphological effects on Turnhole Bend of Green River, Mammoth Cave National Park. Rickard A. Olson, Rickard S. Toomey. 1626
Jewel Cave and Wind Cave vs. one Black Hills Cave System. Andreas Pflitsch, Julia Ringeis. 1632
Jewel Cave and Wind Cave – differences and common features of the two large cave systems in the Black Hills of South Dakota. Andreas Pflitsch, Julia Ringeis. 1637
Geology and tectonics of Polovragi Cave – Romania. Gheorghe Ponta, Gheorghe Aldica. 1638
Influence of meteorology on speleothem deposition: Example from Križna Jama, Slovenia. Mitja Prelovšek. 1643
The Lost City: Hot springs, mixing and a possible model for folia development. J. Michael Queen. 1650
Morphodynamic incidences of the trepanning of the endokarst by solution pipes. Examples of chalk caves in western Europe (France and Belgium). Joël Rodet, Luc Willems, Joël Brown, Sylvie Ogier-Halim, Marie Bourdin, Jean-Pierre Viard. 1657
Development and function of a perched aquifer in the covering layers of the chalk limestone in the Paris Basin (France). Joël Rodet, Joël Brown, Jean-Paul Dupont. 1662
Cyrenaica Karst project (north-eastern Libya). Rosario Ruggieri, Mohamed Abdelmalik. 1667
Mormon Lake – an Arizona USA polje. Graham M. Schindel, Geary M. Schindel. 1672
Caves formed by cambering in the southern Cotswold Hills, England. Charles Self. 1673
Karst hydrology in Utah – an overview. Lawrence E. Spangler. 1678
Groundwater/surface-water relations and water quality within the Mammoth Spring watershed, Markagunt Plateau, southwestern Utah, USA. Lawrence E. Spangler. 1685
Karst and groundwater in northeastern Coahuila: An Edwards Aquifer mirror. Peter Sprouse. 1690
Microclimatic changes during the total solar eclipse on August 11, 1999 and their impact on bat colony activity. Alexey Stoev, Penka Stoeva, Trifon Daaliev. 1693
Influence of the solar and geomagnetic activity on cave climate. Penka Stoeva, Alexey Stoev, Trifon Daaliev. 1694

- International caving studying thermographic anomalies of cave or lava tube entrances for NASA, analog Moon and Mars. Jim Thompson. 1695
- Hidden Spring – a long-known resurgence with a newly identified carbonate aquifer chemistry in Sequoia and Kings Canyon National Parks, California, U.S.A. John C. Tinsley III. 1666
- Estimating karst conduit length using conductivity and discharge measurements in Lilburn Cave, Kings Canyon National Park, California. Benjamin Tobin, Daniel H. Doctor. 1702
- Classification of karst deposits from the Franconian Alb (southern Germany). Martin Trappe. 1707
- Identifying hypogenic features in Greek caves. M. Vaxevanopoulos. 1713
- Preliminary hydrogeologic survey of Petralona Cave, Chalkidiki, Greece. George Veni, Nickos A. Poulianou, Miljana Golubovic Deligianni, Aris N. Poulianou. 1707
- Cave climate studies and the potential extent of the Jewel Cave System. Michael E. Wiles, Rene Ohms, Andreas Pfletsch. 1723
- The cadmium forms in the soil of karst region and their effects on water quality. Yunqiu Xie, Zhang Min, Deng Yan. 1728
- Study of soil factors and karst processes of different land uses of vertical zoned climatic area, Jinfo Mountain, Chongqing, China. Cheng Zhang, Yuan Daoxian. 1731
- Age of cave fills in Slovenia. Nadja Zupan Hajna, Andrej Mihevc, Petr Pruner, Pavel Bosák. 1735

Contributed Papers on Exploration 1737

- Exploration in Dry Cave 2005–2009, Guadalupe Mountains, New Mexico. Stan Allison, Aaron Stockton. 1739
- Two hundred kilometers in Lechuguilla Cave. Andy Armstrong, John T.M. Lyles. 1744
- Resurvey of Sitting Bull Crystal Caverns, South Dakota, USA. Andy Armstrong. 1750
- The Grand Coyer Karst, exploration at the Coulomp Spring (Alpes-de-Haute-Provence, France). Philippe Audra, Ludovic Mocochain, Jean-Yves Bigot, Jean-Claude D'Antoni-Nobecourt. 1755
- The Kronio Project: A first note. Giovanni Badino, Antonio de Vivo, Roberto Prelli, Francesco Sauro, Giuseppe Savino, Spartaco Savio, Roberta Tedeschi. 1760
- The Naica Caves survey. Giovanni Badino, Antonieta Ferreira, Paolo Forti, Giuseppe Giovine, Italo Giulivo, Gonzalo Infante, Francesco Lo Mastro, Laura Sanna, Roberta Tedeschi. 1764
- Exploration in Mammoth Cave. James Borden, Bob Osburn. 1770
- The karst of remote Houaphan Province in northern Laos. Jos Burgers, Joerg Dreybrodt, Francois Brouquisse. 1771
- The Teng Long Dong System and the caves and karst features of Lichuan County, Hubei Province, southwest China. Gerard Campion. 1772
- Mexpé: Sistema Tepepa and area. Christian Chenier. 1778
- Recent explorations in the Whigpistle Cave System, Edmonson County, Kentucky, USA. Joel Despain, Pat Kambesis, John All, Don Coons. 1784
- Geomorphology of the Boquerones Cave System, Sancti Spiritus, Cuba. Joel Despain, Pat Kambesis, Javier Mugica Jeronimo, Cyndie Walck. 1785
- Recent explorations in the St. Paul Karst (Palawan, Philippines). Antonio De Vivo, Leonardo Piccini, Marco Mecchia. 1786
- Tlaloc 2008 exploración – Mexico-Italia, Hueytamalco, Puebla, Mexico. J. Domínguez-Navarro, S. Santana-Muñoz, M. Díaz-Ávila, E. Hernández-Vargas, C. Cruz-García, M. Garcés-Trenado, J. M. Mangas-Moreno Trujillo-López, J. Madrigal-Gómez, V. Cruz-García, G. Pérez-Montes, A. Rodríguez-López, R. Álvarez-D. Brugali Rangel, A. Buzio, F. Camillieri, A. Corra, F. Finali, R. Gaiti, A. Iemmolo, N. Manno, F. Merisio, G. Pannuzzo, S. S. Virgillito Piccitto, F. Vitale, G. Zaccaria. 1793
- Exploration, geology, and hydrology of Sugar Run Cave System, Virginia. Andrea Futrell, Mike Futrell. 1799
- Caves of Tongzi, Wulong County, Chongqing, China. Mike Futrell. 1800
- Sub-alpine karst in northern New Mexico. John Ganter, John T.M. Lyles. 1801
- Study of the localization of the pits in the Plateau of Jurd Afqa (Mount Lebanon) using a geographical information system (GIS). Pierre-Charles Gerard, Badr Jabbour-Gedeon. 1802
- The fissure caves of North Carolina's Mystery Mountain, Rumbling Bald. Cato Holler. 1807
- Successful management of long-term survey projects. Patricia Kambesis, Peter Sprouse, Joel Despain. 1812
- Bob Osburn, John Pollack, Aaron Addison, Dave Bunnell. Tham Khoun Xe of Khammouane Province, Lao People's Democratic Republic (PDR). Patricia Kambesis. 1813
- Exploration of Krubera Cave, the deepest cave in the world: Twenty eight years beneath the Ortobalagan Valley, Arabika,

- western Caucasus. Y.M. Kasian, A.B. Klimchouk, K.S. Markovskoy, G.V. Samokhin. 1817
- 2008 Tongass Cave Project expeditions in south central and southeast Alaska. Johanna Kovarik, Kevin Allred, Steve Lewis. 1818
- Ten years underground with the Maya in Belize, Central America. David Larson, Eleanor Burns Larson, Brian Pease. 1823
- Crystal caves in Hungary. Szabolcs Leél-Össy. 1827
- Soaking wet in Dry Cave: The history of exploration with a promise for the future. Philip C. Lucas, William M. Balfour. 1828
- Eight years of exploration in China by Hongmeigui Cave Exploration Society. Erin M. Lynch, Duncan Collis, Mike Futrell. 1833
- Sistema Sima de la Cornisa – Torca Magali (-1507 m) (Picos de Europa, Spain). Jan Masschelein, David de Roest, David Lagrou, Wim Janse, Vicent Coessens. 1840
- New discoveries in underwater cave systems in Riviera Maya, Mexico. Zdeněk Motyčka. 1841
- New discoveries in the Amaterska Cave – the longest cave system of the Czech Republic. Zdeněk Motyčka. 1845
- 2005 to 2008 speleological discoveries in caves of Khammouane, Laos. Claude Mouret, Jean-Francois Vacquie, Charles Ghommhid, Jean-Michel Ostermann, Jacques Rolin, Helmut Steiner and the Team. 1848
- The international speleological expedition to Iran (2008). Fadi H. Nader, Jean-Pierre Bartholeyns, Mladen Garasic, Reinhold Heinrich (Rene) Scherrer, Simon Brooks, Javad Nezamdoost, ISEI Team. 1854
- Exploration and mapping of Sunnybrook Blowing Cave, Wayne County, Kentucky, USA. Randy Paylor. 1859
- The Centre-Terre Expeditions to Patagonian karst islands: An historic overview. Jean-François Pernette, Bernard Tourte, Richard Maire. 1860
- Preliminary overview on the karst areas of Kalaw (Myanmar). Leonardo Piccini, Antonio de Vivo, Francesco Lo Mastro, Tim Stratford. 1866
- The lava caves of Khaybar, Saudi Arabia. John J. Pint. 1873
- New light on old Guadalupian caves: Grays Cave rediscovered and Hamblens Cave entrance lost. J.M. Queen, M.O. Rosacker, A. Stockton. 1879
- Detailed speleological topography Angel Cave (Lucena, Córdoba, Spain). Fernando Rodríguez-Rojas. 1892
- Priego Subterranean Exploration Group (GESP). 50 years of speleology in Priego de Cordoba (Cordoba – Spain). Fernando Rodríguez-Rojas. 1896
- Houet Tabet: New discovery approach. Ghada Salem, Joseph Tabet, Jack Safi, Lorine Mouawad, Samer Amhaz, Mazen Arzouni, Carole Nehme. 1902
- Five years of speleological investigation in the karst of Sierra Mixteca-Zapoteca, south of Tehuacán, Oaxaca, Mexico. Francesco Sauro, Leonardo Piccini, Marco Mecchia. 1904
- Piani Eterni: Twenty years of explorations in the deepest cave of Dolomite Mountains, Venetian Alps, Italy. Francesco Sauro, Marialuisa Perissinotto, Alberto Riva, Cristiano Zoppello. 1911
- Dalovica Pecina, Montenegro. Jan Sirotek, Zdeněk Motyčka. 1918
- Xilitla: Locus of Mexican caving. Peter Sprouse. 1922
- Webster Cave complex survey update. Benjamin Tobin, Andrea Croskrey, Benjamin Hutchin, Chris Anderson. 1924
- Proyecto Akemabis 2008. Gustavo Vela Turcott, Al Warild, Franco Attolini Smithers. 1927
- Caves of Costa Rica (Central America) and their geologic origin. Andrés Ulloa. 1930
- Use of speleological techniques in ancient mine exploration. M. Vaxevanopoulos. 1936
- Recent exploration at Jewel Cave. Michael E. Wiles. 1937
- Large caves in China. Yuanhai Zhang. 1938

Contributed Papers on the Human Side: Art, History, Medicine, Philosophy, and the Social Sciences 1945

- The presence of Floyd Collins in the Mammoth Cave (KY) area today. John M. Benton. 1947
- Statistical analysis of American cave accident data. Richard L. Breisch. 1949
- The myth of the American Cave Man. Greg Brick. 1955
- Speleophilately: Some odd cave stamps. Jacques Chaber. 1957
- American underground: “Experiences out of time” and chronobiology. Allel Chama. 1964
- 38 years of publication of the Speleological Abstracts. Patrick Deriaz, Reno Bernasconi. 1970
- African Americans and the use of caves as hidden spaces in the antebellum and Civil War South. Joseph C Douglas. 1974

- The Naica Caves and human physiology. Giuseppe Giovine, Giovanni Badino, Antonio de Vivo, Francesco Lomastro, Giuseppe Casagrande, Alicia Davila, German Gonzalez Hidalgo. 1980
- Evolution of speleology in Costa Rica. Carlos Goicoichea, Gustavo Quesada, Andres Ulloa. 1985
- Over 130 years of study and research of Schellenberger Ice Cave and the ice caves at Untersberg (Berchtesgadener Limestone Alps, Germany). C. Grebe, J. Ringeis, A. Pflitsch. 1986
- Josef Anton Nagel and his 1748 manuscript about his cave expedition to Carniola (Slovenia) and Moravia (Czech Republic). Stephan Kempe, Klaus Suckstorff. 1987
- Early cave visits by women and the travel accounts of Lady Elisabeth Craven to the Grotto of Antiparos (1786) and Johanna Schopenhauer to Peaks Cavern (1803). Stephan Kempe, Christild Ketz-Kempe, Erika Kempe. 1993
- Visitor inscriptions in the old passage of Postojnska Jama (Adelsberger Grotte)/Slovenia. Stephan Kempe, Hans-Peter Hubrich. 2000
- A cave survey project for the Duke of Edinburgh's Silver Award. Stephen Kennedy, Craig M. Barnes, Julia M. James. 2006
- The oldest printed cave maps in the world. Massimo Mancini, Paolo Forti. 2011
- Cave conservation through the arts: Carlsbad Caverns National Park's art gallery. Lois Manno. 2012
- Ethics of speleological expeditions to foreign countries. Claude Mouret. 2016
- Human use of caves in Martinique and Guadeloupe Islands, West Indies. Claude Mouret. 2021
- The map of ancient underground aqueducts: A nationwide project by the Italian Speleological Society. Mario Parise, Roberto Bixio, Ezio Burri, Vittoria Caloi, Sossio Del Prete, Carla Galeazzi, Carlo Germani, Paolo Guglia, Marco Meneghini, Mariangela Sammarco 2027
- Venezuela's Chaima indigenous community and its relation to national speleological practice. María Alejandra Pérez. 2032
- A rescue pre-plan for Lechuguilla Cave, Carlsbad Caverns National Park, New Mexico. John Punches, Anmar Mirza, Stan Allison. 2033
- Arch Spring and cave. Jack H Speece. 2038
- National and international partnership building for speleology: The U.S. National Cave and Karst Research Institute. George Veni. 2044
- Spelean history revealed when naming features for a cave survey. Jenny L. Whitby, Kath A. Bellamy, Julia M. James. 2048
- The National Speleological Society Museum: History, progress, and future directions. Amber J. Yuellig, Craig Hindman. 2054

Contributed Papers on Methods and Technologies for Science and Exploration 2055

- Blunder detection in complex survey networks. Peter Bosted. 2057
- LASER scanning use in cave contexts: the cases of Castellana (Italy) and Naica (Mexico). Erminio Paolo Canevese, Roberta Tedeschi, Paolo Forti. 2061
- Digital modes for cave radios. Raymond (Ray) Cole Jr. 2068
- The use of ground penetrating radar in karst areas: methodology, feasibility and interpretation. Jose Antonio Crispim. 2072
- The international trainings of cave rescue organized by the french since 1997. Christian Dodeli. 2073
- Always ready cave photography. Bill Frantz. 2074
- Terrain modeling and GIS techniques for cave expeditions in China. Mike Futrell. 2078
- The importance of geography and GIS in underground rescue. Rodrigo Valentin Gomez-Bermudez. 2083
- Organization of international caving camps: the Humpleu example. Philipp Häuselmann. 2084
- The UISIC workgroup "Topography and Mapping" and its activities. Philipp Häuselmann. 2088
- Making a digital map of Wind Cave, Wind Cave National Park, South Dakota. Rodney D. Horrocks, Daniel C. Austin. 2091
- The Sierra Negra in a PDA: expedition-wide electronic cave surveying. Luc Le Blanc. 2095
- A method for detecting cave connections by induced air flow. Philip C. Lucas, Frank Marks Jr, Nevin W. Davis. 2100
- The history of caving packs. Scott McCrea. 2106
- The Swaygo gear rack trap. Scott McCrea. 2107
- Digital photography in support of the LIDAR project, Edwards County, Texas USA. Kevin McGowan, Xueming Xue, Allan B. Cobb. 2108
- Very long zip-line with speleology techniques: modelization and measurements. Laurent Morel and Frédéric Chambat. 2113
- Light-emitting diodes in the illumination of show caves. Ján Novomeský. 2119

Author Index 2121