BIBLIOGRAPHY OF BELIZEAN CAVING

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Albert, D. & MacLeod, B. (1971). Caving In British Honduras. NSS News 29(1): 6-9. The authors followed up work done by W. Ford Young and Frank Norris. This article describes the exploration of caves at Caves Branch and at Rio Frio. Some useful introductory material on the country (including geology) but no surveys and no coherent cave descriptions.

Ali, E.M. (1994). Aspects of the Karst Geomorphology of the Northern Yaca Plateau, Cayo District, Belize. 138pp. Thesis for PhD, University of Wisconsin-Milwaukee. "...examines aspects of the tropical karst on the northern Yaca Plateau... A GPS was used to collect data about the karst landscape... Residual hills, sinkholes, caves and dry valleys constitute the landscape. Relict features within the karst are located close to the main divide of the Northern Yaca Plateau... Seventy-eight caves have been examined in the study area and 51 of these are truncated vertical shafts... Twenty-four soil samples... were collected and analyzed..."


Anonymous (1973). 1973 Belizean Caving Summarized. Inside Earth 3(7): 34-43. Note from record of activities in Belize, including the connection of the Petroglyph Satibe entrance, exploration in Mountain Cow Cave, St. Herman’s and Caver Branch River Cave, Tiger Bay cave Rio Grange Cave, Ben Lomond and Darby Pat, archaeological discoveries in Blancaneaux Cave and a Chultan at San Antonio (Vaca), visits to Cow Cave, St. Herman’s and Caver Branch River Cave, Tiger Bay cave Rio Frio Cave, Dry Creek Cave, and Cueva de Che Maguera.


Bowden, J. (1988). Finally the St. Herman’s-Petroglyph Connection. National Association for Cave Diving News 20(5): 53-54. Account of both Bowden’s attempts to connect the two caves via the sump; the first, in 1987, failed but a successful attempt was mounted a year later.


Coke, J. (1989). Personal communication with Nick Williams. 1p. Letter describing diving activities on the Cayes. Includes mention of Double Hole Cave (Caye Chapel), Rio Hondo Cave (Ambergris Caye) and Giant Cave (Caye Caulker).


Cousteau, J.Y. & Diole, P. (1973). Galapagos, Titicaca, The Blue Holes. Casell & Company Ltd, London. 304pp. Including many photos. Cousteau took his research ship, Calypso, to the Caribbean in 1967 (?) and spent some time moored over the Blue Hole at Lighthouse Reef. His team explored it fairly thoroughly. Observations of the shaft were made by eye and by using a miniature submarine, and various specimens including a large detached stalagnite were recovered to the surface. Includes many color photos.


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Day, M. (1983). Slope Form and Process in Belize. Proceedings Anglo-French Karst Symposium. September 1983: 363-382. “…Detailed surveys of 25 slope profiles…reveal that the slopes are composed of essentially four identifiable units: staircases, broken cliffs, inclined bedrock and talus slopes. The occurrence of these units is associated with position on the slope over a six year period…weight loss tablets suffer increased weight loss with increasing downslope position…” Includes many references.

Day, M., Gaertner, P. & Neal, M. (1987). A Dye Trace at the Blue Hole in Central Belize. Wisconsin Speleologist 20(2): 1-12. Day and his co-workers performed a dye trace test at the Blue Hole as part of a student instruction course. The article describes the method and value of the dye trace technique, the hydrology of the Caves Branch cave and the relationship between the different caves of the system. Includes maps of hydrology and geology along with extensive references.


Dougherty, P. (1986). Comment and Correction on November Belize Article. NSS News 43(3): 54. Reply by Dougherty to Miller’s letter in NSS News 44(2). Notes errors in original article (NSS News 43(1)).

Dougherty, P. (1985). Belize: The Rio Grande Project. NSS News 43(11): 329-334. Account of the 1984 and 1985 expeditions to Toledo District by Dougherty’s team. Includes a description of the country and of some of the caves found. Lists participants in both trips. The trip surveyed Tiger Cave (Hich Tulz) and Bat Cave (Muche) on the Rio Grande. Photos and a geological map but no surveys or coherent cave descriptions.

Exley, S. (1994). Caverns Measureless to Man. Cave Books, St. Louis, 325pp. Chapter one of Exley’s posthumous autobiogaphy gives details of exploration of Giant cave under Cave Caukel in 1982, including a survey. Exley claims that the original discoverers of the cave were Paul and Shannon Heinerth, but does not give a date of discovery. The survey is not consistent with subsequent publications by Coke, etc.


Graham, E. & McNatt, L. (1980). Excavations in Footprint Cave, Caves Branch, Belize. Journal of Field Archaeology 7(2): 153-172. Footprint Cave is located in the Caves Branch region. In 1979, the authors conducted an archaeological excavation at this site and this report contains detailed descriptions and discussions of the artifacts they found. The introductory pages include location information for Actun Polblanche, Tiger Bay Cave, St. Margaret’s Cave, Uchentzrub, Chanona Cave, Rio Frio Cave, Eduardo Quisrot Cave, Awe Cave, Actun Balam, Hokeb Ha Cave and Caves Branch Cave.


Hollings, P. (1994). Personal communication with Nick Williams. 25 April 1994. 2pp. Letter with brief description of MCG expedition’s results, including Mai’s Cave,

Illiffe, T. (1989). Personal Communication with George Venn 6pp. Report to the Smithsonian Institution. Brief description of the work done by Iliffe and Serban Sarbu in the spring of 1989. They spent a period of seven weeks looking at the cave fauna in submerged caves on the Cayes and discovered various shrims, etc. The main site of interest was Giant Cave (Caye Caukel) but dives were also undertaken at Caye Chapel and Colombus Caye, as well as the Caves Branch Blue Hole.

Jackson, C. (1994). Exercice Cuevas Humedas. 25/170(IMJIM) BTY 19 Fd Regt Royal Artillery. 34pp. Jackson and his team diverted to explore caves around Blue Creek when their original target (Chorreadero in Chiapas) was rendered impossible by guerillas. Blow by blow account of an (eventually successful) attempt to connect the Rio Blanco to Blue Creek. Crude survey, lots of logistic details.

Jacob, J.S. & Hallmark, C.T. (1996). Holocene Stratigraphy of Cobweb Swamp, a Maya Wetland in Northern Belize. Geological Society of America Bulletin 108(7): 883-889. “We investigated the soils and sediments of Cobweb Swamp,... The...depression probably formed as a karstic doline or polje in interbedded limestone and marl of late tertiary or Pleistocene age. After ca. 5600BP the Cobweb depression was affected by relatively rapidly rising sea levels in the area... Massive deforestation is the most likely explanation for a freshwater lagoon,...Peat began to fill the...lagoon some time before 5000BP, probably the result of shallower water levels from decreasing runoff resulting from reforestation after abandonment by the Maya.”


Marochov, N. & Williams, N. (1992). Below Belize. QMC Speleological Expedition/Wessex Cave Club. 58pp. Report of the 1988 Queen Mary College and the 1989 British (Anglo-Canadian) expeditions, includes introduction to the country plus commentary on Caves Branch, Gracy Rock, White Ridge, Indian Creek, Barton Creek and Roaring Creek areas as well as Caves and the Maya and references. 8 pages of colour photographs plus (A3) surveys of Actun Zotziha and White Ridge/Garby Pat system. 20 monochromes photos. Other surveys include all caves mapped by the two expeditions (Mountain Cow, Cararpace Cave, Cedar Bank Cave, Gracy Rock Hill Cave, Gibnut Cave, Gracy Point Rift Cave, Manatee River Cave, Number three and Number Four caves, Gothic Caverns, Five Blues River Cave, Holes In Six Chamber (Actun Tunichil Muknal), Actun Tan U Wiliul, Actun Boc Chi’ich’, Actun Ya’ax Kan, Sunken Forest Cave.)

Marochov, N. & Williams, N. (1989). Queen Mary College Speleological Expedition to Belize 1988. Caves and Caving 43: 8-11. Concise description of the work done by the 1988 QMC Expedition with many maps and photo’s. Describes work in White Ridge (Darby Pat/White Ridge systems [incl. half page survey], Mines of Moria, Barton Creek (Actun Zotziha, the Hole in Six), and at Gracy Rock (Gibnut Cave).


McNatt, L. (1986). Personal Communication with Nick Williams. 4pp. Letter following initial enquiry regarding 1988 QMC Expedition. Includes logistical information and mentions caves in Belize (Blue Creek, Ochochpec and Rio Grande) and around Augustine (Rio Frío).


Miller, T. (1995). Hokeb Ha, Belize. Exploration and Research with the Jason Foundation Expedition. NSS Bulletin 57(1): 68. Abstract of research undertaken by Miller during his involvement in the Jason Project which broadcast live television by satellite from Blue Creek Cave in 1994. In addition to providing educational material to school age children, Miller also managed to perform water analysis and flow measurements.

Miller, T. (1994). Personal Communication with Nick Williams. 3pp. Letter describing Miller’s involvement in the Jason Project, including an A4 map of Blue Creek cave. Also mentions further discoveries in Petroglyph.


Miller, T. (1988). Belize. *DC Speleograph* 44(11): 5-10. Account of the 1988 expedition which attempted to connect Cebada with Tun Kul. The expedition was dogged by injury and equipment failure and failed in its objective. It did, however, find significant new passage, some of it spectacularly decorated.


Miller, T. (1986). Karst Hydrology and Geomorphology of Belize. *Proceedings 9th International Congress of Speleology*. Barcelona August 1986: 23-24. Divides the country into five sub-areas of karst and describes the surface features of these areas as well as the cavern development. Includes figures for carbonate solutions concentrations and references.


Miller, T. (1984). Chiquibul Expedition 1984. *Canadian Caver* 16(2): 40-43. Chronological account of the exploration of the 1984 National Geographic funded expedition. Discoveries included Chiquibul Chamber, Tapir-off Cave, various serially named small caves and link passages, Belize Chamber (in Actun Tun K’ul), Ch’en Nonoch and other parts of the Chiquibul. The expedition was in two phases (April and May). Article includes lists of participants and drawing of Belize Chamber superimposed on Carlshad’s Big Room.


Miller, T. (1981). Houses of Stone-Caving in Belize. *Caving International Magazine* 11: 16-24. Essentially a write up on the December 1979 Expedition to Caves Branch and Toledo District similar to *Canadian Caver* 12(2), but includes more detail about Actun Lubul Ha including a survey (18"x3") as well as photos and surveys (4"x6") of Blue Creek Cave and Ochochpec.

Miller, T. (1981). Hydrochemistry, Hydrology and Morphology of the Caves Branch Karst, Belize. 280pp. Thesis for PhD, McMaster University. Miller thoroughly investigated the Caves Branch area, and explored over 40km of passage. He makes observations on the hydrology, geology, morphology and formation of the caves, and includes surveys (at A4) of Candlestick Cave, Actun Chanonan, Mountain Cow Cave, parts of Caves Branch River Cave, Actun Lubul Ha, Actun Chek, Thunder Road, Ochochpec, Blue Creek Cave.

Miller, T. (1980). Thunder Road. *Canadian Caver* 12(2): 6-8. Thunder Road is a 300m side conduit to the main Caves Branch River Cave. The article describes how Miller pushed it solo, free-diving several short sumps. Includes a survey (4"x6").


Miller, T. (no date). The Karst Development and Associated Archaeology of the Chiquibul, Belize. Unpublished report 40pp. At the end of two months field study, 23km of underground passage had been explored, along with the discovery of a large number of significant artifacts. Geological and hydrological investigations were also undertaken. Report includes details of itinerary, discoveries, finances.

Miller, T. et al. (1980). Un-BELIZE-able Caving. *Canadian Caver* 12(1): 40-56. A group of seven cavers, mostly from McMaster University, visited Belize in late 1979. Exploration included Petroglyph, Actun Lubul Ha, a visit to Cay Caulker (mentions underwater caverns) and a day spent prospecting unsuccessfully. The team spent a considerable time in the Toledo district where work included extensive exploration of Blue Creek and Ochochpec. Article includes photos and 4"x6" surveys of Blue Creek and Ochochpec.


Musgrave, R. (ed) (1993). Blue Creek Cave. The Belize Expedition Curriculum, Jason Foundation for Education: 57-60, 149-154, 179. The Jason Project’s 1994 session included live-by-satellite broadcasts from Blue Creek Cave with Tom Miller presiding. This is the educational source material for teachers, which only includes information of a very general “this is how caves are formed” nature, but does include a survey of the cave.

Neal, M.K. (1990). Tufa Dams in the Humid Tropics: A Case Study on Little Barton Creek, Cayo District, Belize. 141pp. Thesis for PhD, University of Wisconsin-Milwaukee. “... Tufa is widespread in humid tropical karst, but it has not been studied in detail. 29 tufa dams have formed along a 1.4km section of Little Barton Creek. This study has focussed on the morphology of the dams... Human activity has influenced dam development.”


Reddell, J.R. (1981). A Review of the Cavernicole Fauna of Mexico, Guatemala and Belize. Bulletin of the Texas Menorial Museum. University of Texas at Austin. 327pp. Reddell attempts “to provide a broad overview of the cavernicole fauna...and to provide the specialist with a checklist and bibliography as complete as possible of the cave adapted...species from these three countries.” He summarizes a history of a faunal study for each country and describe briefly the geomorphology of the areas under study. A comprehensive and systematic study.


Reeder, P. (1993). Speleological and Geoarchaeological Investigations of the Northern Vaca Plateau. Unpublished manuscript, 35pp. Further investigations of small caves in the northern Vaca Plateau area. The report includes much interpretation to place the exploration within its geological context. Surveys and descriptions of Pit Cave, Pot Cave, Outcrop Cave, Hilltop Cave, Pottery Hill Cave, Vadose Crawl Cave, Bushman Cave, Homesite Cave, Loose Ledge Cave, Reflection Cave, Big Mouth Cave, Junior’s Pit Cave plus mention of Natural Bridge Cave and Macal Chasm. Photos. No grid references.


Roberts, C. (1990). Observations of Maya Cave Archaeology in Belize. Cave Science 17(3): 123-129. “The paper describes the archaeological observations of Mayan cave use recorded on the British Speleological Expedition to Belize, Central America in 1989. A background to the study of Belizean archaeology is given with comments on the problems of looting from archaeological sites including caves. A description of the caves by the Maya used is given and the evidence, particularly, of burial. The archaeological remains identified were predominantly pottery and human remains with occasional more specialised artifacts. The report itself concentrates on the human remains study and concludes with comments on the integration of specialist studies with the major aims of speleological expeditions.” Includes photos of artifacts.


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Surveys (A4) of K Aizalal Obox, Boulder Cave, Bat Cave, Location map (A3) plus surveys of 10 minor caves discovered on 1991 Little Quartz Ridge Expedition. Published in reduced form in the expedition report.


Unpublished Survey (approx 36x12 inches) held in Department of Archaeology Library, Belmopan.

Unpublished Survey (A3) held in Department of Archaeology Library, Belmopan.

Unpublished Survey (presumably by Tom Miller) held in Department of Archaeology Library, Belmopan.

Unpublished Survey (on 5 approx. A3 sheets) held in Department of Archaeology Library, Belmopan.


Williams, N. (1994). *Bibliography of Belizean Caving 2nd Edition*. Wessex Cave Club. 20pp. Earlier version of this bibliography. Includes 28 trivial references to QMC 1988 expedition which have been deleted from this version to save space.

Williams, N. (1993). Personal Communication with Chris Jackson. 8pp. Listing of grid references for approx. 100 caves, ordered by 1:50,000 sheet number. Also descriptions of how to get to tourist caves in Caves Branch and list of some sites for further investigation.

Williams, N. (1992). Belize: An Introduction to the Land and Caves. *International Caver* 5: 4-11. Essentially the same at the first chapter of the *Below Belize* report of the 1988 QMC and 1989 Anglo-Canadian expeditions, but with a revised final section which gives a brief resume of the explored caves of each major caving area. A reasonably detailed account of the country and its caves. Includes maps, photos, references, list of longest and deepest caves and a survey of Actun Bo'chiich.'

Williams, N. (1992). *Below Belize 91*. *Cave Science* 19(2): 33-39. “A combined team of British civilian and military cavers visited southern Belize in March and April of 1991 to look for caves around the western end of Little Quartz Ridge. The amount of cave passage discovered was disappointingly small since the many sinks in the area are shallow and show signs of regular flooding. Many are blocked with mud and debris. Even in the three places where sizeable streams leave the impermeable rock of the Ridge itself, the sinks proved to be largely inaccessible.” Includes location map, surveys of Xibaldal, Bat Cave and Actun K’aizalal Obox plus photos.


Williams, N. & Clark, T. (1990). *Queen Mary College Below Belize 1988*. N.N. Williams/QMC Expeditions Committee. 213pp. Very detailed report on the logistics of the organization of the 1988 Queen Mary College Expedition. Includes chapters on finance and fundraising, shipping, transport, food, equipment photography and projects to study bats and fish. Appendices include the original survey data from the expedition and references. 19 photographs but no surveys.


Williams, P. (1976). The Plebotomine Sandflies (Kiptera, Psychodidae) of Caves in Belize, Central America. Bulletin of Entomological Research 65: 601-614. The author studied sandflies in Millionario Cave, Augustine Caves and at San Antonio. (Sandflies are significant because of their ability to carry Leishmaniasis among other diseases.)


Wright, A.C.S., Romney, D.H. & Arbuckle, R.H. (1959). Land in British Honduras, Report of the Land Use Survey Team. Colonial Research Publication (24) HMSO. 327pp & maps. The definitive work on the soils and landform of Belize. The country is divided into 24 sub-areas and the landform, soils, vegetation and agriculture of each is described and discussed. Suggestions for land use are proposed. The text also includes a discussion of geology, geomorphology and anthropology. Caves are only mentioned in passing but are mentioned under the appropriate sub area headings. Appendices and maps include a list of flora, soils, population, rainfall and ancient Mayan sites.


Young, W.F. (1961). Spelunking in British Honduras. International Speleologist 1(1): 5-13. A description of the caves of Belize by the earliest explorer of modern times. Ford Young, in association with Frank Norris, visited “Ben Lomond...just west of the Southern end of Northern Lagoon” and Manatee Caves. They also visited caves in the Indian Creek area at Caves Branch and in the Chiquibul as well as well known archaeological sites in the company of the then Archaeological commissioner, A.H. Anderson. A map of major sites is included.

1:50,000 Survey of Belize in 41 sheets. Mostly prepared from aerial photographs in uninhabited areas. Contour intervals vary from sheet to sheet. Many errors in watercourse mapping in karst areas. Sheets show several caves, some named, some not. In particular Sheet 21 (Gracy Rock), Sheet 23 (Vacca), Sheet 24 (Barton and Roaring Creek), Sheet 25 (Caves Branch, Indian Creek), Sheet 26 (White Ridge), Sheet 28 (Rio Frio), Sheet 33 (Chiquibul), Sheet 34 (Eduardo Quiroz), Sheet 37 (Little Quartz Ridge), Sheet 41 (Blue Creek).

A0 Surveys of Caves Discovered on 1991 Little Quartz Ridge Expedition. Published in reduced form in the expedition report.

A0 Survey of Cebada Cave Resulting from 1986 and 1988 Expeditions.