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Google Fusion Tables

The work presented here was begun nine years ago. Google hosted a Penrose conference called: "Google Earth: Visualizing the Possibilities for Geoscience Education and Research." Conference proceedings were published as GSA Special Paper 492. At that conference we were introduced to the brand new Google Fusion Tables. Many of us embraced them with enthusiasm. The day after the abstract for this poster was submitted, Google announced: "We plan to turn down Fusion Tables and the Fusion Tables API on December 3, 2019."

Desktop Computers

Filemaker Database: Owners of Filemaker on either a Mac or Windows computer can download and open our databases. Mac users who do not own Filemaker can download and use our stand-alone runtime database, which provides similar functionality, but for only this database.

We maintain two dabases: A complete one, which includes all of the paths taken by the field trips (178 MB), and one which only has Stops and Views (85 MB). For most users the smaller one will suffice, but if one wishes to follow the route as the leader intended, or for some other reason wants to check out the paths, they should use the bigger one.

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Fossils			

GIS: Although Google Earth permits untyped data, many GIS programs require a Schema to set up data types on import. The database now exports kml files with typed data. Files which some folks may have downloaded prior to 2019 did not.

The output from the Altamont Quad was imported using MaPublisher to produce the image shown below. It was opened in Adobe Acrobat, revealing the information for the icon which was clicked on.

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\otimes	- STOP 3. Section at Long Road ravine (Thompson's Lake section of Ri - STOP 4. Indian Ladder Trail at the John Boyd Thacher State Park.	NYSGA191-A4-
492 850	- STOP 4. See figure 5 - STOP 4. Thompson's Lake Bioherm - STOP 10. ENTRANCE SINKHOLE OF KNOX CAVE - STOP 11. Thacher Park Overlook	Thompsons
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Microsoft Excel File: We provide an excel spreadsheet with a searchable table which permits the user to search for terms, ranges of data, etc. This has all the Stops and Views, but none of the paths, author information or introductory remarks contained in the complete database.

By clicking on the filter icon, users can see a variety of search possibilities. The top of the spreadsheet has a region where limits of latitude and longitude are calculated around a target location, going some number of miles (provided by the user) to the north, south, east and west of that location. And example is shown where these results are inserted into the filter drop down menu.

There are a few convenient search terms which may help some users: <i>> will find all occurences of fossils whose names were in italics in the Guidebooks. The tag was used for other italicized words, such as living plant species, etc. <sub> finds any subscripts and <sup> any superscripts, so to find carbon dioxide, search for CO₂.



Microsoft Word Template: To export the data from the Excel file, copy it and paste into the provided Word template. Save the resulting file as a text file, change ".txt" to ".kml" and it should open in Google Earth.

Numbers and Textedit: Mac users can accomplish the same tasks using Numbers and Textedit. The appropriate files are also available for download on our site.

Four Tools to Access the Database of NYSGA Field Trips

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82 OF 850	records roun	u					Su	n=0



The database currently has 446 Paths, 3,403 Stops (where folks got out of their vehicles to look at something), and 5,096 Views (where the Guidebook points out something, in passing). And we have only done from 1956 to 2006, with another one being produced every year. This is too much data to be conveniently handled, this poster presents ways we have come up with to manage it.





1978 Syracuse

http://ottohmuller.com/nysga2ge/ProjectOverview.html

	Presentations: Guidebook Chapters and kmz files: 1956-1997 1998-Onward
1956 Rochester	
1957 Wellsville	
1958 Peekskill	
1959 Ithaca Cornell	
1960 Clinton Hamilto	n College
1961 Troy R. P. I.	
1962 Port Jervis Broo	oklyn College
1963 Binghamton	
1964 Syracuse	
1965 Schectady Unic	on College
1966 Buffalo	
1967 Newburgh SUN	Y New Paltz
1968 Flushing	
1969 Plattsburgh	
1970 Cortland	
1971 Potsdam	
1972 Colgate	
1973 Brockport	
1974 Fredonia	
1975 Hempstead	
1976 Poughkeepsie	Vassar College
1977 Oneonta	
1978 Syracuse	
1979 R. P. I.	
1980 Rutgers	

Other than the last few years, the NYSGA Guidebooks are online. We have broken them up into individual trips. These can be downloaded from the page shown to the left. Links with names will download the chapter and the symbols to the right will download the associated kml files.

IOS Portable Devices

Situation: A new Earth Science teacher has just been hired at Hamilton Central School. She wants to know what geologic features have been identified on NYSGA field trips within a 5 mile radius of town. With Filemaker Go (free) on her iPhone and iPad, she got the Google Earth images below. After downloading the needed maps, she got the bottom three images which do not require internet access.





STOP 3: Bailey Road Qu.

STOP 3: Bailey Road Quarry

The seventeen meters of section at this locality represent the Pompey Member of the Skaneateles Formation. From the base of the section to the top there is an overall coarsening trend from shale through fine sandstone. Within this

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1972 F 0.02	Outcrop of Pecksport Shale Member, Hamilton Group, on right			
1972 I 0.01	Drive north on NY 46 and 12B across			
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Avenza Maps





H.B.Rollins, N.Eldridge, R.M.Linsley NYSGA 1972 Trip F Stop 0.0

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Search within Avenza Maps

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Judith Nagel-Myers Geology Department St. Lawrence University Canton, NY 13617

STOP 3: Bailey Road Quarry STOP 3: Bailey Road Quarry e seventeen meters of section at this locality resent the Pompey Member of the Skaneateles mation. From the base of the section to the top ough fine sandstone. Within this coarsening nd there are four, meter-scale coarsening vard units. In the terminology of Bush and lins (1984) the entire outcrop would be a fifth der cycle and the smaller coarsening sequences ould be sixth order cycles. The base of the smaller cycles is indicated by topographically leve reas within the quarry. The lowest small-scale coarsening cycle is bioturbated shale with abundant, well preserved,

ssemblage is dominated by Nuculites oblongata, I. triguiter, Modiella pygmaeaand Paracyclas licata. The top of the first cycle grades upward into packed silty shell bed containing Longispina, Aucrospirifer, and rare septate rugose corals. The econd depositional cycle grades upward from a siltstone through a coarse siltstone. The finer grained interval is bioturbated but contains no fossils with the exception of rare cephalopods. The coarser part of the cycle contains a

honetid/Mucrospirifer assemblage. The third cycle progressively coarser than the first two, grading om mudstone through very fine sandstone. The ase is again bioturbated but relatively nonfossiliferous. The top of the cycle is capped by a acked shell bed containing the brachiopod genera Rhipidomella, Pseudoatrypa and Athyris. These brachiopods, particularly *Pseodoatrypa*, are

relatively rare in the rocks of central New York and ave been interpreted to represent clear non-turbi ater conditions. The fourth cycle is again coarse than the previous three, grading from siltstone to fine sandstone. Brachiopods dominate the fauna ough bivalves, particularly Cypricardinea indenta aracyclas lirata and Nyassa arguta, are quite bundant. Bryozoa and zoophycus are common in ne upper part of the cycle but appear only ccasionally below this. Several packed shell beds e located within this cycle. Two are similar to the e capping the third cycle (i.e. dominated by Rhipidomella and Athyris) while several others are ominated by Spirifers and Ambocoelia, with lesser mounts of Chonetes and other organisms

he depositional sequences at this locality provide some clue to sedimentation rates if the assumption is made that fossil preservation potential and biogenic productivity, in terms of shell production, is constant through time. The fossiliferous shaley interval of the lowest cycle can be interpreted to have relatively low sedimentation rates due to the esence of numerous infaunal and epifaunal





PocketEarth

Situation: A geologist studying eskers wants to visit the Ingraham esker in the northeast corner of NY. Using our database she checks it out with the Google Earth app on her iPad. Our database tells her that it is on the Beekmantown quad, which she loads it into Avenza Maps on both her iPad and her iPhone. It, like their app, is free from their store. Although it presents the information in a less readable format, this is offset by the convenience of being able to carry it around in her pocket.





STOP 3. Ingraham Esker. earing ice none. The hage is ovenant by near er rhythmites which are in turn conformably

e morphology of the ridge is a consequence

faunal assemblages at this locality were ribed by Cronin (1977, loc. 18; 1979, 1981, loc. zel studied ostracodes from several localities e esker and found a total of nine species (in onin, 1977) which occurred between 11 .6 ka The following ostracodes were found at locality in the shelly marine gravels that cap the

Cythere lutea (Mueller, 1785) theromorpha macchesneyi (Brady and Crosskey theropteron champlainum (Cronin, 198 heropteron latissimum (Norman, 1865) marchinella logani (Brady and Crosskey, 187 rocyprideis sorbyana (Jones, 1857) icytheridea bradii (Norman, 186 arsicytheridea punctillata (Brady, 1865) he annual range of bottom-water

leotemperature was probably 0° to 12°C and alinities were polyhaline, between 18 and 30 ppt, is indicated by the faunal assemblages. This linity was the closest to normal marine conditions t was reached in this part of the Champlain Sea east for shallow-water environments. D.A.Franzi, T.M.Cronin NYSGA 1988 Trip B1a Stop 3.00

BEEKMANTOWN, N... STOP 3. Ingraham Es.

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ne sedimentology and stratigraphy of the Ingraham Esker was summarized Denny (1972, 1974) and more recently by Diemer (in press). The esker onsists predominantly of upwardly fining subaqueous outwash that was leposited in a series of esker fans at the terminus of the northward treating ice front. The ridge is overlain by fresh water rhythmites which are turn conformably overlain by a massive mud facies. Diemer (in press) tributes the massive mud facies to an early, transitional phase between resh (Lake Fort Ann) and marine conditions (Champlain Sea). The section is nconformably overlain by coarse, fossiliferous gravel that probably epresents wave-reworking of the previously deposited sediment during the narine regression. Denny (1972, 1974) attributed the low relief of the ridge to extensive wave erosion, however, Diemer (in press) suggests that the morphology of the ridge is a consequence of its origin as subaqueous utwash.

Placemark Description

he faunal assemblages at this locality were described by Cronin (1977, loc. 8; 1979, 1981, loc. 4). Hazel studied ostracodes from several localities in the esker and found a total of nine species (in Denny, 1972). The esker's faunas epresent the <i>Hiatella artica</i> Phase of the Champlain Sea (Elson, 1969; Cronin, 1977) which occurred between 11.6 to 10.6 ka The following ostracodes were found at this locality in the shelly marine gravels that ca the rhythmite facies.

i>Candona</i> sp.
 i>Cythere lutea</i> (Mueller, 1785)
 >Cytheromorpha macchesneyi</i> (Brady and Crosskey, 1871)
 i>Cytheropteron champlainum</i> (Cronin, 1981)<br / i>Cytheropteron latissimum</i> (Norman, 1865)<br / i>Finmarchinella logani</i> (Brady and Crosskey, 1871)
dr / i>Heterocyprideis sorbyana</i> (Jones, 1857)
 i>Sarsicytheridea bradii</i> (Norman, 1865)
 i>Sarsicytheridea punctillata</i> (Brady, 1865)
<br /:

Situation: A teacher leading a field trip wishes to bring along a geologic map of the area they will visit, with NYSGA stops located on it. Downloading the pdf from the NY State Geological Survey site, she crops it in a GIS and outputs a geo.pdf which can be uploaded to Avenza maps.



42.63513, -74.06302