stones of the state have been continued and completed.

Mineralogy.—A discovery of notable interest is the location of a series of vein caverns lined with perfectly developed calcite crystals of extraordinary size. A single crystal of remarkable crystallographic completeness and of a fine amethystine tint weighs nearly 1,000 pounds and innumerable others from 50 to 500 pounds each. In habit these crystals are highly modified rhombohedra with basal pinacoids and scalenohedral faces, frequently twinned but exemplifying a common form without great modification. Probably no such development of calcites so gigantic in size and at the same time so uncomplicated, clear and well built has before been seen in this country. An extensive series of these crystals has been removed for the museum and measures have been taken to control the entire supply for the state's collections.

Caverns.—Careful exploration has been made of the caverns of the Helderberg limestone plateau for the purpose of ascertaining their relations to the existing topography and drainage. It has been possible to determine that this network of underground passages represents successive stages of work not dependent wholly on the joint systems of the region and that, as lines of drainage, these passages are to-day in a decadent stage.

ARCHEOLOGY.

For two years past options have been taken on various lands believed to carry sites of Indian villages or burial grounds, and these are excavated as opportunity affords. This year the archeologist opened a village and burial site near Ripley on the shore of Lake Erie. The encroachment of Lake Erie on this site has been so great as to destroy some part of it, this of itself aside from internal evidence indicating its considerable antiquity. One hundred and fifty graves and refuse pits were opened and from them were obtained an amazing number of all sorts of relics and utensils of this early Erie culture, stone implements and ornaments in great variety, fabrics, skin clothing, seventy pots, about half of which were unbroken, skeletons with ornaments attached and even parts of skin and flesh preserved. No site ever opened in New York has proved so instructive and so prolific in the vestigia of Indian life. The additions thus made to the archeological collections are extensive and important.

BOTANY.

Reexamination of species of Crataegus and the search for additions to fungous flora have been the chief objects of the past field season.

ENTOMOLOGY.

Protective and control measures against the San José scale, the grape root worm, tussock moth and elm leaf beetle and other insect enemies of the fruit and shade trees have been actively carried out. Special investigations upon the Caddis flies and gall midges have also been continued.

INTERCOLLEGIATE GEOLOGICAL EXCURSION.

The annual New England intercollegiate geological excursion was held on Saturday, November 3. This excursion, organized in 1900 by Yale and Harvard, has met at Holyoke, Worcester, Boston, Salem and Meriden, and has annually brought together students from all the New England colleges and many of the normal schools and high schools, participation being limited to teachers of geology and certain advanced students. The expeditions have done much to improve teaching on the subject and to develop friendly relations between the geological departments of the different institutions.

Last Saturday the excursion was conducted at Meriden, Conn., by Professor Gregory, of Yale, and was preceded by a meeting on Friday evening at which the geology of the Meriden region was described. The object of the trip this year was to study the sandstones and interbedded lavas of the Triassic formation, and special attention was given to an important 'fault line,' on which the displacement amounts to 2,000 feet. Professor W. M. Davis, who worked out the structure of the region, pointed out the topographic features which were the result of the faulting; Pro-

fessor W. N. Rice explained the Ash Bed of Lamentation Mountain, and Professor J. Barrell, the two lava flows of the second or main sheet. In addition to advanced students from colleges and teachers from high schools the following institutions were represented: Harvard, Professors Davis and Wolff, Drs. Johnson and Huntington; Massachusetts Institute of Technology, Dr. Loughlin; Wellesley, Professor Fisher; Holyoke, Professor Talbot; Williams, Professor Cleland; Brown, Professor Brown; Wesleyan, Professor Rice; Trinity, Professor Genthe; Rutgers, Professor Lewis; Yale, Professors Gregory, Barrell and Schuchert and Mr. Bowman; U. S. Geological Survey, Dr. George Otis Smith; Salem Normal School, Professor Moore; New Britain Normal School, Professor Loomis. Professor H. F. Cleland, of Williams, was appointed permanent secretary. The next meeting will be held at Providence, Rhode Island, under the leadership of Professors Brown, Emerson and Woodworth.

LOCAL ARRANGEMENTS FOR THE NEW YORK MEETING OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE AND THE AFFILIATED SCIENTIFIC SOCIETIES.

NEW YORK CITY having been selected at the New Orleans meeting of the American Association as the place of the next annual meeting, a notice was published in SCIENCE calling a meeting of local members at Columbia University on January 18. At this meeting plans were discussed and a local executive committee was elected as follows: J. J. Stevenson, chairman, C. C. Adams, Charles Baskerville, Franz Boas, N. L. Britton, H. C. Bumpus, Chas. A. Conant, Simon Flexner, Wm. J. Gies, Wm. Hallock, Alex. C. Humphreys, G. S. Huntington, Edward Kasner, Henry F. Osborn, C. L. Poor, Clifford Richardson, E. B. Wilson, Frederick J. E. Woodbridge, J. McKeen Cattell, secretary. This committee has held four meetings at the American Museum of Natural History. The business transacted and the preliminary arrangements for the meeting may be summarized as follows:

1. The first general session will be held in Earl Hall, Columbia University, at 10 o'clock on the morning of Thursday, December 27. The retiring president, Dr. C. M. Woodward, will introduce the president of the meeting, Dr. W. H. Welch, and President Butler will welcome the members. The usual announcements will then be made. The sections of the association will hold at 11 o'clock their meetings for organization, followed in several cases by the address of the chairman. Council meetings and meetings of organization of the special societies can to advantage be held at 9 o'clock. All the sections of the association and, so far as possible, all the national societies will meet at Columbia University on December 27 at 2 P.M. Several of the sections of the association will hold sessions in which topics of general interest will be discussed. At 8 o'clock the retiring president will give his address in Horace Mann Hall. From 9 to 11 o'clock the trustees of Columbia University will offer a reception. At 10 o'clock there will be an informal smoker in the Faculty Club.

2. On Friday the sections and the societies will hold their regular sessions. It is expected that there will be joint meetings when the same subjects are covered and that some meetings will be arranged of general interest to all members of the association. Friday evening is reserved for dinners and meetings of special societies and groups. It is also suggested that smokers and informal meetings be held on the Wednesday evening preceding the meeting.

3. The meetings will continue on Saturday with some scattering. Thus Section K and the societies devoted to the medical sciences will meet at the Rockefeller Institute, and Section G and the American Botanical Society will meet at the New York Botanical Garden. There will be a lecture at the City College at 12 o'clock, followed by a luncheon and an inspection of the new buildings. At 3:30 o'clock ten marble busts of pioneers of American science, presented by Mr. Morris K. Jesup to the American Museum of Natural