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CHARLES REUBEN KEYES AND THE HISTORY OF IOWA ARCHAEOLOGY¹

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Charles Reuben Keyes (1871-1951) achieved recognition during his lifetime as the "founding father" of Iowa archaeology, and later assessments confirmed and reemphasized Keyes' stature as Iowa's pioneer archaeologist. The collections and documents Keyes compiled, his interpretive publications, and the records of field work he coordinated have proven more valuable to Midwest and Plains archaeology every year. This article emphasizes Keyes' involvement in the development of professionalism in American archaeology and Iowa's position in the growth of the discipline from 1920 to 1950. Keyes' contacts with the principal archaeologists of his era ensured Iowa's involvement in the development of survey methods and the establishment of regional taxonomic and classification systems. Scant resources for excavation, student training, and technical publications eventually lessened Iowa's contributions to North American archaeology in the mid-1900s.

INDEX DESCRIPTORS: archaeology, Iowa, history of science, C.R. Keyes

Charles Reuben Keyes (Figure 1), who lived from 1871 to 1951, was for most of his adult life a professor of German Language and Literature at Cornell College in Mount Vernon, Iowa. Yet his principal claim to recognition as an eminent scholar derives from work he did largely in his spare time in an entirely different discipline. From 1921 through 1950 Keyes directed the Iowa Archaeological Survey, a systematic statewide program of investigations which put Iowa on the nation's archaeological map. Keyes' work contributed methodologically and substantively to the development of North American archaeology as a profession. The principal concerns addressed in this paper are the position Iowa held in the development of professionalism in North American archaeology and the degree to which Keyes brought Iowa archaeology to a professional level.

Professionalism, in the present context, means the establishment of frameworks for conducting archaeological inquiry as a scientific discipline, with a full panoply of investigative goals, objectives, methods, and techniques. Professionalism requires the development of networks for regular communication among practitioners, including establishment of consistent terminology, consensus on broad aspects of goals and ethics, and means for sharing information of value to the discipline. Progress in the discipline requires constant building upon previous phases of work. Professionalism in scientific endeavors therefore entails specialization, publication of data and ideas, training of students, and, eventually, admittance into the profession of only those individuals trained by other recognized professionals. I do not mean to ignore or denigrate the crucial roles played by amateurs in data collection and interpretation, but the focus here is on the development of professionalism and the attendant roles required for the discipline's leaders.

This paper does not dwell on the achievements of the Iowa Archaeological Survey or on Keyes' extraordinary research efforts. These topics are the subjects of several excellent reviews, including those of Anderson (1975), Jackson (1984), Tandarich and Horton (1976), McKusick (1975, 1979), and Tiffany (1981, 1986; Tiffany et al. 1990). Although no comprehensive biography of Keyes exists, articles published about him and the history of Iowa archaeology in general provide thorough summaries of his contributions. In fact, the history of Iowa archaeology has been written about more often and in more detail than that of most other midwestern states (see sources cited above and Alex 1980; Kurtz 1979; McKusick 1970, 1990; Zimmerman 1976), which is remarkable for a discipline that has until recently employed only a small handful of practitioners in Iowa.

In light of the wealth of publications on Keyes, one might ask whether anything of importance remains to be said about his work. The answer is that any pioneering scholar's work can be productively



Fig. 1. Charles Reuben Keyes.

reviewed from several perspectives. For a researcher such as Keyes who maintained detailed records of his work, opportunities continually exist to reexamine goals, methods, and techniques, as well as the intellectual climate, biases of various sorts, and external influences on the work. Early Iowa archaeology bears continued examination because of a resurgence of interest in the history of American archaeology (e.g., Christenson 1989; Griffin 1985a, 1985b; Lamber-Karlovsky

¹Iowa Quaternary Studies Group Contribution Number 48.

1989; Meltzer et al. 1986; Reyman 1992; Trigger 1985, 1989; Watson 1985; Wedel 1981; Willey and Sabloff 1980; Williams 1991). Histories of archaeological work within particular regions can be valuable to current researchers interested in knowing how, why, when, and by whom significant data were gathered and interpretive frameworks developed (Fitting 1973). Entrenched classification schemes can and should be subjected to regular review and revision if necessary, but only with knowledge of the context in which these systems were initially established. Similarly, the importance of archival records and older collections as sources of previously untapped or otherwise informative primary data needs constant emphasis (Cantwell et al. 1981; Green 1987; Lyon 1989). Therefore, renewed examination of Keyes' career helps us understand how and perhaps why Iowa archaeology developed as it did, a prerequisite for making informed assessments of its present condition and plans for its future directions.

North American archaeology became a recognizable professional discipline between 1920 and 1940. The transformation of American archaeology within that generation was so significant that the structure and organization of archaeology in 1940 more closely resembled today's efforts than those of 1920. The principal changes between 1920 and 1940 involved the establishment and solidification of communication networks among practitioners, establishment of regional and topical specializations, a sharp increase in the number of graduate training programs, and agreement upon broad methodological and substantive outlines, i.e., how archaeology should be done and how the big picture of North American prehistory should be organized (Guthe 1939). Dunnell (1986) notes in particular that the acceptance of the methodology of culture history marked the emergence of the discipline of North American archaeology in the 1930s. A significant factor in archaeology's transformation from a poorly organized pursuit to a professional science was the establishment in 1935 of the Society for American Archaeology and its journal, *American Antiquity* (Griffin 1985a; Guthe 1967). The SAA's first editor, W.C. McKern, played an especially important role in this transformation.

Charles R. Keyes participated in many of the developments that advanced American archaeology to a professional discipline. He conducted an enormous amount of work in the 1920s and early 1930s on behalf of the National Research Council's Committee on State Archaeological Surveys, the forerunner of the Society for American Archaeology (Griffin 1985a; Guthe 1930). In fact, Keyes helped create the methodological framework for statewide archaeological survey programs. His sponsor at the State Historical Society of Iowa, Benjamin F. Shambaugh, undertook publication by the Historical Society of the Committee's Guidelines for State Archaeological Surveys (Wissler 1923).

Keyes was instrumental in establishing the first Plains Conference for Archaeology in 1931 (Helgevoel 1981:21-24; Wedel 1982:26-36). He served on the planning committee for the second Plains Conference, held in 1932 in Lincoln, Nebraska, and, along with Ellison Orr and Paul Rowe, discussed Iowa archaeological discoveries there (Frison 1973:173; *Nebraska History Magazine* 1932; Wedel 1982:41-43). Keyes brought the third Plains Conference to Mount Vernon in 1936, where he invited Plains and Midwest (Wisconsin and Illinois) archaeologists to discuss the newly developed Midwest Taxonomic System (Wedel 1982:44).

Keyes attended many other regional and national anthropological conferences, presenting descriptive and interpretive papers on Iowa archaeology and on connections between prehistoric complexes and historic tribes. While spreading the word on his Iowa research, he also absorbed reports of new finds and interpretations in other states, and participated in the definition of seminal taxonomies and typologies. Keyes' participation was especially pronounced and influential in three conferences which developed important archaeological classification schemes for the Eastern Woodlands and Plains culture areas:

1. The 1935 Indianapolis Archaeological Conference formally clas-

sified midwestern and eastern U.S. archaeological complexes within the Midwest Taxonomic System (National Research Council 1937). The conference's landmark publication, which included a revised version of Keyes' presentation (Keyes 1937a), led to use of more consistent terminology, improving the organization of cultural classification and enhancing archaeological communication (Fisher 1986; Griffin 1976; McKern 1939).

2. The 1941 "Conference on the Woodland Pattern" helped clarify the material content and distribution of Woodland manifestations throughout the Eastern United States (*American Antiquity* 1943). Keyes did not attend, but he submitted extensive materials on Woodland cultures in Iowa which supplied significant summary information and was later published (Keyes 1951).

3. The Fifth Plains Conference, held in 1947 in Lincoln, also focused on definition of cultural complexes. Despite initial withdrawal of his contribution from the resulting publication, Keyes eventually consented to its inclusion (Keyes 1949). That paper — a concise summary of Great Plains affiliated Iowa complexes — helped solidify western Iowa's identification with the Plains, structuring research directions for the following decades.

Keyes' intensive participation in groundbreaking conferences and publications placed him at the forefront of part of archaeology's redefinition as a professional discipline in the 1920s and 1930s. Keyes commanded national respect for his rapid acquisition of an encyclopedic knowledge of Iowa archaeology, despite having no formal training in American archaeology — he knew literally everything anyone at the time could know on the subject. His stature arose also from his organizational abilities, reflected by his creation of the Iowa Archaeological Survey. The survey was designed on the basis of his own conceptions (Keyes 1920), refined through discussions with the Committee on State Archaeological Surveys and visits to directors of active state programs in Wisconsin and Ohio. Keyes clearly established the mission, goals, and objectives of the survey in terms understandable to a broad spectrum of colleagues, both professional and amateur (Keyes 1925b). The survey program was highly ambitious yet achievable within the expected limits of resources, and Keyes pursued his vision systematically. When opportunities for additional resources became available, such as federal relief funding from 1934 through 1939, he applied the funds to new types of projects which built upon the accomplishments of earlier work rather than simply conducting more of the same work (e.g., Keyes 1934a, 1935, 1937b, 1940a, 1940b, 1941b; Orr 1963).

The plan Keyes developed for the statewide survey program is worth reviewing. Here is an outline of his 1922 plan, presented in a 24-page typescript entitled "Proposed Archeological Survey Work in Iowa," submitted to Benjamin Shambaugh, the Superintendent of the State Historical Society of Iowa (Keyes ms.a, July, 1922):

- I. A Preliminary Survey
 1. A Bibliography of Iowa Archaeology
 2. The Present Status of Iowa Archaeology
 3. Study of Known Archaeological Materials; a Surface Survey
 4. Local Surveys by Experienced Students and Collectors [by "students" he appears to mean "experienced collectors with scientific abilities"]
- II. A Specialized Survey
 1. An Intensive Survey of Known Materials [i.e., detailed artifact studies]
 2. Intensive field Work on Focal Points [i.e., regional surface surveys followed up by careful excavation at selected sites; Keyes cites the work of Mills and Shetrone in Ohio and Barrett and Skinner in Wisconsin as examples to emulate — he would like to bring them to Iowa to observe and advise]
- III. The Permanent Preservation of Important Sites and of the Collected Materials
 1. Cooperation with other State Organizations [for acquisition

and preservation of sites]

2. The Preservation of Collected Materials

IV. Library Facilities and the Keeping of Records

Keyes supplied details on each point's importance and implementation. This plan constituted a detailed research design and a comprehensive program for systematic archaeological coverage of Iowa. It ranks among the best research and conservation plans ever devised for Iowa archaeology.

With Shambaugh's endorsement and support, Keyes went to work and soon began accomplishing what he had set out to do. The State Historical Society of Iowa supported the survey in many ways, while the University of Iowa provided funds and administration through its Graduate College for much of the work in the 1930s and 1940s. The survey was considered a program of the Historical Society, although in its later years it was as much a University of Iowa program. Keyes' position was that of Research Associate in the University's Graduate College. (Shambaugh's position as University of Iowa political science department chairman and the physical location of the Historical Society in Schaeffer Hall on campus blurred the practical effects of administrative distinctions between the Historical Society and the University). Cornell College, the State Historical Society, and the University of Iowa all provided work space for the survey. Keyes' teaching duties meant he was able to work on the survey only during summers until his retirement from Cornell in 1941. During the 1940s, as Lecturer in Anthropology at Cornell and as Visiting Research Professor of Anthropology at the University of Iowa, he was able to devote himself to archaeology on a full-time basis. Although by that time he was in his 70s, he vigorously pursued survey work and writing and he initiated excavations as well (Keyes 1943).

Keyes submitted informative annual reports to the State Historical Society and the University of Iowa, and 16 annual progress reports were published as well (Keyes 1923, 1925a, 1927a, 1928c, 1929a, 1930, 1931, 1932, 1933, 1934b, 1935, 1937b, 1940a, 1940b, 1941b, 1945). The hundreds of documented sites in Keyes' records, the 108,000 artifacts in the Keyes Collection, the publication of important summary reports, and the preservation of many important sites around the state are testimony to the survey's success (Tiffany 1981, 1986; Tiffany et al. 1990).

Shortcomings in Keyes' program have been identified as well (McKusick 1975, 1979), most simply the result of low funding levels and the part-time nature of the work. The relatively small role for excavation in the original plan hindered stratigraphic and chronological studies. Keyes was keenly aware of the importance of excavations as an element of comprehensive archaeological investigations; for example, he noted that the lack of attention to habitation site survey and excavations in the ambitious Northwestern Archaeological Survey of the late 19th century hindered that program's effectiveness (Helgevoel 1981:36; Keyes 1928a). Keyes supervised some digging in 1934 in Allamakee County, where Federal relief funds obtained through the Iowa State Planning Board paid significant dividends by documenting five sites with Oneota material stratified above Woodland material (Keyes 1934a, 1937a:7). The federally funded excavation program continued and expanded through the 1930s with Ellison Orr in charge of field activities (Keyes 1940a; Orr 1963). Keyes successfully obtained funds and handled logistics (Keyes 1941a:95), but spent relatively little time directly supervising Orr's excavations.

McKusick (1975, 1979) cited the absence of a plan to publish technical reports on survey and excavation work as seriously reducing Keyes' program's ultimate effectiveness. It is difficult to disagree with this statement. Orr typed volumes of technical reports but these were not published until 1963, and then only in microcard format (Orr 1963). Keyes published numerous semi-popular articles in Iowa, Wisconsin, and Minnesota journals (e.g., Keyes 1927b, 1928a, 1928b, 1929b, 1941a, 1942, 1943, 1951) but decided against writing technical reports for publication. He stated his reasoning quite clearly

in a February 5, 1938 letter to W.C. McKern:

"Does it ever strike you that some of us are getting too blooming technical? [The draft letter on file shows that Keyes originally wrote "professional" and replaced it with "technical."] Some of the recent reports, at first reading, at least, seem to be written for a pretty small group of specialists, Greenman's Younge Site, for example [Greenman 1937]. Will a dozen people read it through? In my present mood I can't imagine myself ever attempting such a report, writing one, I mean. It seems to me I have a duty to perform to the average intelligent man, who is, after all, the fellow who has furnished most of the money to support my efforts. The few people who desire the exact percentages of everything can work it out in my laboratory, if they desire to do so. I wouldn't expect many callers. Maybe I'm in the wrong mood this morning but anyway I sometimes feel like this." [Keyes ms.a]

In 1940, as a condition for continuation of federal excavation funding, Keyes was told to fill out a form in which he wrote the following under "Plans for Publication": "First, a volume in the Iowa Centennial Series to report on the Iowa archaeological survey; later, more detailed professional papers on single phases or aspects of the archaeology of Iowa" (Keyes ms.a, February 6, 1940). There was no mention of publishing detailed site reports or technical artifact descriptions. Keyes intended to write a "book-sized report of the Survey work," telling Ellison Orr, "I am anxious that you read a completed manuscript of the Iowa Survey, criticize it all you please, and finally hold in your hands a bound volume of a book which meets with your approval" (Keyes letter to Orr, December 24, 1948; Orr ms.).

In 1947 Keyes restated his conviction that he should continue to write semi-popular works, to appeal to both laypeople and professionals:

"At this time I am trying to write a summary of the preliminary archaeological survey of Iowa which Ellison Orr and I have been working on (part time with both of us) for more than a quarter of a century. Our belief is that our report to the people who have given us rather generous support should be such as those of good average intelligence can understand... [I]t should be possible to present a good deal of scientific material in a form that a considerable number of people can read with some pleasure and profit. If we miss this aim, then of course it will be too bad." [Keyes ms.a, January 11, 1947 letter to Neil Judd, Smithsonian Institution]

Keyes' publications do indeed provide excellent introductions to Iowa prehistory, and they were all that educated laypeople needed. But Keyes' colleagues in the profession wanted more. They needed precisely the kinds of technical data Keyes did not publish. McKusick (1979:6) reports without attribution that archaeologists in other states "were disturbed by the absence of detailed Iowa publications during the 1930s." Orr stated in a 1940 letter to amateur archaeologist Paul Rowe that "it is time for Mr. Keyes to be making some complete and comprehensive reports on the large amount of work done, the results, and the material collected. We are far behind Nebraska in this respect" (Orr ms.a, November 3, 1940).

McKern told Keyes very pointedly that there is a need for specialists and for technical reports, even those reports "wholly intelligible to a limited group. This is true in every science." McKern noted technical reports were needed for specialists and for future reference, and that "I am afraid that you will have to put up with technicality in archaeological methods. As a matter of fact, archaeology is making a terrible struggle to become a science. It can never do this without the developing of methods that will insure extreme care and accuracy. Such methods are bound to be highly technical..." [W. C. McKern, in Keyes ms.a, February 15, 1938]

The only anthropology degree-holding Iowa archaeologist of the 1940s, John Bailey, told Keyes, "We are all looking forward to the day

when you will get into print the treasure trove of archaeological information which you have accumulated in the last twenty years" (Keyes ms.a, February 11, 1942). Bailey also wrote, "I am hunting old-time manuscripts and trying to make head and tail from the field notes made twenty and thirty years ago. Let this be a warning to you to get into print your valuable contributions to the archaeology of Iowa" (Keyes ms.a, January 5, 1943). Let it indeed be a warning to all of us; Bailey's own archaeological work, conducted during his tenure as director of the Davenport Public Museum, was cut short by his suicide in 1948 and has been particularly difficult to organize and utilize. Keyes, to his credit, wrote basically what he had planned to write, and the Iowa Archaeological Survey collections and archives supplied material for numerous theses and research papers in later years (e.g., Fugle 1962; Henning 1961; Ives 1963; Logan 1976; Wedel 1959). The Keyes Collection recently has been reviewed and re-cataloged so that it is an even more valuable archaeological data bank (Tiffany 1981, 1986; Tiffany et al. 1990).

Keyes' resources and the amount of time he had for technical analyses and writing were extremely limited. No funds and no trained analysts were available to assist with preparation of technical publications. Still, it cannot be denied that Keyes' work lacked this critical element of a fully professional discipline — the publication of technical data and specialized reports — precisely when such material needed wide distribution. Without those reports, Iowa lagged behind as other states and the Society for American Archaeology greatly expanded their technical publication programs. Iowa, which led the way in establishing statewide surveys in the 1920s, received progressively less professional attention through the 1930s and 1940s because of the absence of detailed publications. Authors of major regional syntheses obtained the detailed data they needed on Iowa archaeology either through personal study of Keyes' material (e.g., notes on "Study of Iowa Pottery," by J.B. Griffin, July-August 1935 [Keyes ms.a]; Griffin, March 21, 1936 letter [Keyes ms.a]; Griffin 1943:vii, 287-93, 1976:24) or through extensive letters from Keyes which summarized his recent work and current interpretations in somewhat more detail than his publications (e.g., Bennett 1952; Martin et al. 1947; based upon long letters from Keyes to John W. Bennett, January 21, 1948 ["Iowa Archaeology: A Condensed Statement"], and from Keyes to George I. Quimby, June 24, 1939 [Keyes ms.a]). In the 1930s, compendia of Midwest and Plains prehistory made extensive use of Keyes' summary reports (Shetrone 1936:330-339, 494; Strong 1935:284-288), but, ultimately, the comparative studies and areal syntheses of culture history which were some of the mid-century's crowning archaeological achievements (e.g., Griffin 1946, 1952; Wedel 1961; Willey and Phillips 1955) took only minimal note of the Iowa data.

Iowa's contribution to American archaeology lacked another element crucial to the discipline's professional development; that is the training of students, preferably but not necessarily at the graduate level. Any discipline's traditions must be passed first-hand to succeeding generations if they are to survive and develop. Keyes' Iowa Archaeological Survey involved no field schools or other formal archaeological training of students, except for a Cornell College summer class in 1930 (Keyes 1931). Because of Keyes' teaching responsibilities in another discipline, he was not able to teach anthropology and archaeology until his retirement at age 70. He was finally able to run field courses and involve Cornell College and University of Iowa students in large excavations in the 1940s. Despite his advanced years and deteriorating health, Keyes conducted tests and excavations in 1942, 1944, and 1945 at the Minort's, Spring Hollow, and Ginger Stairs rockshelters in Palisades-Kepler State Park, Linn County (Keyes 1945). The work trained students in field methods and successfully obtained Woodland materials needed for Keyes' summary publications on Iowa prehistory (Keyes 1943, 1951). Keyes directed a graduate research assistant in writing a Master's thesis on surface collected material in these late years

(Grissel 1946), but aside from Mildred Mott's landmark thesis from the University of Chicago (Mott 1938), it cannot be said that Keyes directly inspired preparation of important student research projects during his lifetime. The paucity of resources and opportunities to train students left Iowa with no direct successors to Keyes' legacy.

The University of Iowa, while supporting Keyes' work through a research professorship, was late in adding anthropology and archaeology to its instructional and research programs. Griffin has pointed out that "Iowa for a long time had no archaeological program associated with instruction and student training" (Griffin 1976:7). He had written Keyes that "It has always seemed unfortunate to me that Iowa University has not had an archaeologist on its staff. . . . Is there not some way in which a young man could be brought to Iowa City so that he would have the advantage of a number of years' association with you and obtain something of your insight into the archaeological material and problems in Iowa?" (J.B. Griffin letter, July 28, 1948; Keyes ms.b.).

In 1949, the University of Iowa hired cultural anthropologist David Stout and dental pathologist and physical anthropologist Alton Fisher. They had few opportunities to work with Keyes, however. By 1951 archaeologists also were on staff at Effigy Mounds National Monument and at the Sanford Museum in Cherokee. All of them wanted to learn from Keyes, and Keyes provided as much assistance as he could, but the hours he was able to devote to archaeology were spent writing what turned out to be his last summary publication on Iowa archaeology (Keyes 1951).

Duane Anderson (1975:79) recognized that "Iowa archaeologists contributed little to the development of methodology on a professional level during the first decade of the Contemporary Period [1951-1960]." He did not offer an explanation but one reason may have been this break in continuity resulting from the absence of younger archaeologists trained in Iowa or with first-hand experience with Keyes. Entire lines of inquiry passed, at least for a time, with Keyes' passing; progress on important topics slowed as a new generation of Iowa archaeologists was trained during the 1950s. Fortunately, as noted earlier, theses were written on Keyes' and Orr's material, but no anthropologist except Mildred Mott could point to Keyes as a mentor.

With perfect hindsight, of course, it is easy to overlook the obstacles Keyes faced in trying to implement his survey program. The state lacked the resources and infrastructure to build upon the successes of the Iowa Archaeological Survey. Iowa did not keep pace with Illinois, Nebraska, and other states during the 1930s and 1940s, and Keyes did not train students or publish technical reports. Selfishly, we may wish he could have quit teaching German and become a full-time archaeologist. But he was a man of many interests and talents, and he sacrificed enormously to be able to do what he did in archaeology. And what he did was monumental, participating significantly in the development of American archaeology and defining both the broad outlines and many of the fine details of Iowa prehistory.

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Correspondence file at Effigy Mounds National Monument, McGregor, Iowa. I thank all of the institutions which house these materials for their assistance.

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