Men of Science in Indiana Past and Present

John S. Wright, Indianapolis

The history of Science in Indiana may be said to have begun about 150 years ago with the advent of General George Rogers Clark, who came to this territory first in 1778 and who was a resident of the present area of the state much of the time thereafter until his death in 1818.

Clark was a neighbor and a boyhod friend of Thomas Jefferson from whom he probably acquired his interest in science. Throughout his life as opportunity offered he was in communication with Jefferson and on one occasion sent him specimens of mammoth bones from the Ohio Valley.

Clark's powerful, active mind and training as a frontiersman and soldier made him an acute observer, constantly studying the Indians and the features of the country over which he fought. The Indian mounds engaged his attention. He discussed them with intelligent Indians and left among his records a paper on their origin, sharply at variance with the opinions then held by archeologists. Clark's conclusions have since proven to be substantially in accord with the deductions of those who later made studies of the excavations.

In his biography of Clark ("Clark of the Ohio"), Frederick Palmer says, Audubon, who came to Louisville in 1807, visited Clark, who on acquaintance said Audubon was a man after his own heart; that he was not like some of the "American Museum fellows," speculating on second-hand information (a reference to their theories of the origin of the mounds), but going out and seeing the life of the forests for himself. Audubon's notes of his visits with Clark were lost. Clark made none.

In 1803 before starting on the celebrated Lewis and Clark expedition, William Clark called on his famous brother, the General, at Clarksville, Indiana, from whom it is believed that he received priceless advice on the conduct of the expedition. General Clark was keenly interested in the Indians and in the scientific results of the exploration, and must have been delighted with the account William brought him when he made his last visit on the return of the expedition in 1806.

Although Clark published nothing on scientific subjects there was at least one paper on archeology in his records, referred to above. General Clark manifested repeatedly the proper spirit of the investigator, appreciation of scientific work and of true scientists. It is probably quite within bounds to claim him as the first man of science or of known scientific interests in Indiana.

The New Harmony period of science in Indiana runs from about 1825 to approximately 1860. During this time some of the most distinguished of American and a few celebrated European scientists visited New Harmony. Certain eminent scientists were resident in the community and did important work there. For example, David Dale

Owen made New Harmony his home and the seat from which he directed government geological surveys of sections of Iowa, Illinois, Minnesota, Nebraska, and Wisconsin during much of the period between 1837 and 1852. Considerable has been written of the New Harmony group so that it should not be difficult to assemble the facts essential to the history of this period of science in the state.

Probably the details of the story of science in the state for the first ten or twenty years following the beginning of the Civil War will require considerable searching of the records in the archives of the various colleges and universities of Indiana.

Once it becomes known that a responsible group in the Academy is endeavoring to prepare a history of science in the state it may be found that individuals interested in special fields of science have collected data on men and work in their respective fields and that they will be willing to contribute from their collections.

In 1885 Indiana was the home of a group of brilliant and purposeful scientists, some of whom were leaders of national standing in their respective fields; among them were Jordan, the Coulters, Mendenhall, Noyes, Campbell, Butler, and Branner. When these men organized the Academy their sponsorship gave it immediate standing and the Indiana Academy of Science has been one of the most successful of all similar state institutions. Until a high degree of specialization was reached, resulting in the organization of state branches of certain groups, for example the Indiana branch of the American Chemical Society, the Academy of Science membership included nearly all residents of the state engaged in scientific work. Its publications are a fairly complete index to the scientific interests and accomplishments in Indiana for a period of approximately 25 years.

Records of the special scientific societies supplementing the Academy's own proceedings will contain the majority of the material needed to write the story of the various fields of research in the state since 1885.

A comprehensive account of science in Indiana will include some of the activities of the state Audubon society, the engineering societies, research departments of technical industries, the public health service, the state departments having to do with conservation and the medical group.

In contemplating the undertaking, which happily has begun under a committee headed by Dr. Edington, it appears that the final committee should include a representative of each department of science, and one who has been in the state long enough to know something of the traditions of our higher educational institutions and of the Academy of Science.

The committeeman on geology, for example, could enlist the aid of someone in each college to search the records and report on all men connected with that institution, both past and present, who as geologists deserve a place in the record. Committeemen representing astronomy, botany, chemistry, engineering, mathematics, medicine, physics, zoology, etc., etc., could do the same with respect to their departments.

The Biographical Section

The most useful and prized section of a volume on *Men of Science in Indiana Past and Present* will be the biographical dictionary or Who's Who. The story of science in the state as suggested above although quite important, would be to an extent prefatory, as the interest probably will center on the biographies.

The relationship of the man to the State in respect to his scientific career should be so clear that the authors and the sponsors of the biographies will not be open to the charge of claiming too much for Indiana science. An examination of a few biographies makes it apparent that there are seven or more degrees of connection between Indiana and men of science. These range from that of the native sons educated and residing in the state throughout their careers to that of men born and educated elsewhere but resident in the state for a short time only; men whose major work was done elsewhere. The following are examples of degrees of relationship:

Men of Science in Indiana Past and Present

1. *Native*—Education and career in the state.
   Examples—Amos W. Butler, Charles C. Deam, A. L. Foley.
2. *Native*—Educated in Indiana, career chiefly elsewhere.
   Examples—Harvey W. Wiley, Henry L. Bolley, the Cory brothers, H. T. and C. L., W. C. Allee.
3. *Native*—Higher education and career elsewhere.
   Examples—John S. Billings, M.D., George Brown Goode, George A. Reisner, Clarence A. Mills, M.D.

---

4. *Not Native*—Educated and worked in Indiana.
   Examples—John M. and Stanley Coulter, Julius A. Nieuwland, Willis S. Blatchley.
5. *Not Native*—Educated in Indiana but worked elsewhere.
   Examples—None occur to me now but doubtless the the alumni rolls of many Indiana colleges contain the names of such.
6. *Not Native*—Educated elsewhere but worked in Indiana.
   Examples—Gen. George Rogers Clark, David S. Jordan, T. C. Mendenhall, Thomas Gray, J. C. Arthur, and hosts of others.
7. *Not Native*—Educated and worked in science elsewhere but had brief residence in the State, or made visits in pursuit of scientific work.
   Examples—Constantine S. Raffinesque, John J. Audubon, others temporarily associated with the New Harmony group, Heinrich Schliemann, whose residence in Indianapolis for one year to obtain a divorce was of doubtful credit to the State.

With a list of names for consideration, questionnaires could be prepared and submitted for the information needed to prepare terse biographies. The American Men of Science style of biography is tentatively suggested as a model, to which might be added a brief bibliography of the more important papers and a statement of outstanding work of the individual, especially that done in Indiana.

Living subjects could be asked to submit their own biographies on a form provided. Obviously all such autobiographies would have to be subjected to careful editing to attain uniformity of style.

If each biography contained a terse statement of the ancestral stock of the subject, indicated the occupation of father, necessity and extent of self-support in college, valuable data would be afforded for statistical studies. It might not be expedient to publish all such data, nevetheless it would be worth collecting.

The Bulletin of the A.A.A.S. for July, 1944, carried an editorial by Secretary F. R. Moulton on the "Early Environment of Eminent Scientists." In this he said that there is a general impression that eminent scientists have had unfavorable educational environments in their early youth. This impression is neither affirmed nor denied but used by Dr. Moulton to point out the interest and importance of an investigation of the facts because of the light they would throw upon the problem of education and the factors which contribute to success in science.

The editorial states that men who have achieved high success in nearly every field have come from the farms and villages and quotes a recent advertisement as stating that every one of the presidents of the 18 operating companies of the Bell Telephone System began work as a clerk or in some other lowly position at a salary ranging from $25 to $65 a month. These successes, Dr. Moulton concludes, were not due to educational opportunities or to the lack of them and he asks "What factors internal and external are conducive to exceptional achievement?"

In the preparation of a volume on Men of Science in Indiana, it is recommended that in the assembling of biographical sketches an effort be made to include data that would throw light on early environmental and other factors that dispose men and women to scientific pursuits. With this in view the committee should include a member trained in statistical methods who could make some valuable deductions from the data.

About ten years ago I had the Fourth Edition of American Men of Science (1927) carefully examined and all biographies of men with Indiana connections marked. There were 13,500 entries in the volume; 692 were of men born or then living in Indiana, or 5.1 per cent of the whole, whereas the population of the state was then but 2.6 per cent of the national total.

Scientists living in the state in 1927	215 or 1.6 per cent
Scientists born in the state	540 or 4.0 per cent
Scientists both born and living in the state in 1927	63 or 0.46 per cent approx.
Scientists of Indiana connection starred as among the 1,000 distinguished	49 or 4.9 per cent

On the whole, men of science with Indiana connections made a creditable showing in 1927. Probably they would appear quite as well now.

In all probability Dr. Edington and his committee have considered many if not all of the details of procedure mentioned in this paper, nevertheless I felt an urge to present them as a result of contemplating the subject for several years, also to emphasize the richness of opportunity which confronts those who assume the work. It is predicted that the subject will grow in attractiveness and significance as more of the Academy members become engaged in helping the editorial committee.

The cost of collecting and editing the data will eventually amount to considerable. A small fund is now available for the preliminary work. From year to year the Academy should set aside from current net income such amounts as may be judged expedient to continue the work and to supplement other funds that may be contributed.

A carefully prepared brief history of the development of science in Indiana with a biographical dictionary of our men of science, past and present, would be a credit to the Academy, reflect honor on the State, and possibly incite similar work in other states. May the committee be confirmed, strengthened and supported in the enterprise.