

Effects of Indiana's Streams and Lakes on Science

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Indiana's streams and lakes notably influenced the development of various sciences as a result of three special conditions. 1) Indiana has relatively many streams and lakes because it possesses a humid climate and because most of it was recently glaciated. Only a tiny fraction of the earth is as rich in rivers and lakes as is Indiana. This richness includes several different kinds of lakes and several kinds of streams as well as a wide variation in the size or volume of streams and in the regularity of stream flow. 2) Indiana was on the frontier of settlement at a time when various scientific studies first became considerable in America. The New Harmony Settlement, established by Robert Owen in 1825, attracted several scientists from Europe who made significant studies of the life of Indiana's water bodies. For example, Thomas Say has been called "the father of American conchology and entomology." 3) Indiana was the home of several especially notable scientists. For example, David Starr Jordan's years in Indiana (1874-1891) resulted in numerous studies of Indiana fishes and in the early training of several men who later became distinguished. Dr. Jordan was exceptionally enthusiastic, and stimulated to higher achievement numerous young men. One of his students, Eigenmann, made special studies of fish and other life of caverns, and attained fame as a pioneer in that field. Other of his students studied insects, birds, and reptiles. These animals are especially numerous along or near streams and lakes. Notable Indiana zoologists and their special interests include B. W. Everman, C. H. Gilbert, and C. H. Eigenmann (fishes); W. S. Blatchley, E. B. Williamson, J. J. Davis and A. C. Kinsey (insects); Everman's study of an Indiana lake, Maxinkuckee, was one of the best early studies of an American lake.

Many kinds of plants are also found in or near bodies of water. The study of plants was greatly stimulated by John Merle Coulter, who was a leader in science in Indiana 1874-1893 (Hanover and Wabash Colleges and Indiana University). He was the second president of the Indiana Academy of Science (following Jordan) and became president of Indiana University when Jordan left for Stanford University. Stanley Coulter, his brother, at Purdue 1887-1926, was highly significant in this state for decades. C. C. Deam's volumes on *Trees of Indiana* and *Flora of Indiana* (1940) won for Indiana leading rank among the states so far as flora are concerned. A large share of the plants discussed in these volumes are found near water.

Indiana's many streams facilitated the study of the geology and paleontology of the state; also, partly by creating exposures of the rocks, and by revealing special conditions along various valleys. Indeed the earlier studies of Indiana geology and paleontology were largely made along streams.

Indiana's streams were so significant in the early years that much of the first sizable Geography of Indiana dealt with their location and depth at high water and low water stages. Most of the early settlers established

their homes close to streams or springs. Many township and county boundaries were partly along streams as was the southern and southwestern boundary of the state. The northern boundary of the state was partly along Lake Michigan.