CONFERENCE OF MIDWEST BIOLOGY TEACHERS  
October 25-26, 1957  
Drake University, Des Moines, Iowa  

Discussion Group #1  
Use of Freshman Courses  
A. Should a general biology course act as the initial course for botany and zoology majors?  
B. How should courses for major and non-major differ?  

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Marillas College  
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Earlham College  
Parsons College  
Crawfordsville, Ind.  
Tarkio College  
Burlington College  
Richmond, Indiana  
Suomi College  
Creighton Univ.  
Fairfield, Iowa  
Southwest Baptist Coll.  
Univ. of Wichita  
Tarkio, Missouri  
Culver Stockton  
Ferris Institute  
Burlington, Iowa  
Univ. of Minn (Duluth)  
Carthage Coll.  
Hancock, Michigan  
Culver Stockton  
Omaha, Nebraska  
Univ. of Nebraska  
Ferris Institute  
Bolivar, Missouri  
Lincoln College  
Carthage, Illinois  
Clark College  
Culver Stockton  
Wichita, Kansa  
Ripon College  
Univ. of Minn (Duluth)  
Big Rapids, Mich.  
St. Olaf College  
Univ. of Minn (Duluth)  
Carthage, Illinois  
Ottumwa Heights Coll.  
Marquette Univ.  
Canton, Missouri  
LaCrosse State Coll.  
LaCrosse State Coll.  
Duluth, Minnesota  
LaCrosse State Coll.  
LaCrosse, Wisc.  
Drake University  
Grand View College  
LaCrosse, Wisc.  
Kansas State Teach Coll.  
Des Moines, Iowa  
Creston Jr. Coll.  
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Nature of First Course - Discussion  
The nature of introductory courses in Biology are wide spread; included are such problems as medical requirements and transfer students. Of those represented, 19 have introductory Biology courses, 7 do not; Ferris Inst., and Creighton U. have separate courses for majors and non-majors.

(80% of Biology in Michigan is taught by teachers with no more than 2 years of Biology)
Several schools have moved from Botany and Zoology to Biology. One school has reversed the procedure. A few schools teach three introductory courses. A suggestion of a one semester course in cellular Biology to be followed by Botany and/or Zoology was made. A plea for a course specifically in a single discipline was also made. At St. Olaf College, General Biology is not a dead end course but may lead into Botany or Zoology. Apparently a consensus of opinion of those present favor a single course for all types of students.

**Surveys relating to Biology. - Discussion**

Wisconsin and Kansas have had surveys on training of teachers. Sollinger of Simmons College has studied college courses and content. The Botanical Society of America has made a survey for Botany. Minnesota (St. Olaf) has studied background preparation of teachers. Harvard U. has published two papers on Science and General Education.

The need for a philosophy of Biology course was suggested. In the course best met by emphasis on types of principles? A third concept combines the two. A student after a year of Biology should be able to form an opinion on biological phenomena. There are many concepts of Biology that have great integrating value. Is the Science requirement commensurate with that of other areas? The group feels that there should be required two years of science, one Biological, the other Physical.

A beginning course should involve the scientific method, and the nature of the controlled experiment. Does a demonstration really convince? May an experiment really betray the method? The experiment may be built with the student so that he understands its limitations. A beginning student can only approach or approximate the real attitude of science. Some things must be taken in faith. Group experiments (as with bean seedlings) may make more convincing and real, the controlled experiment and the scientific method. There is a need to correlate the results of the various types of courses with the achievements of students. At the University of Omaha, in Chemistry, a laboratory course and demonstration course tentatively showed no significant difference (personal correspondence). At the University of Iowa, it is reported that students can enter sophomore Botany courses from the Biology of Man course, but that they are more poorly prepared than those that have had Botany. The commonest course is for 8 hours through the year. A few teach a semester each of Botany and Zoology.

**CONCLUSIONS:**
The group was widely varied with respect to background, facilities, aims, etc., but a reasonable degree of unity was found in the following statements.

1. We believe that General Biology can and probably should be the introductory course in the Life Sciences. It should be made to provide an adequate background for second level courses.

2. That the course should be identical for majors and non-majors.

3. That special terminal courses should be avoided.

4. That the introductory course should include laboratory work.

5. That in the attempt at integration, the organism as a whole should not be lost sight of.

6. That neither a types no principles course is ideal; it should combine the best qualities of both.