6. That the above course be given over a period of one year carrying a minimum of 8 semester hours of 12 quarters as the case may be.

7. Laboratory and Field experience should accompany the course and be of a type that will enable the student to formulate ideas from his personal observations.

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

Discussion Group # 3

What is the relative value of separate and combined courses, as e.g., anatomy and embryology? What should be included in a fused anatomy and embryology course?

Chairman: - Mark M. Keith, Univ. of Minnesota (Duluth), Minn.

Recorder: - Mary Gojdics, Barat College, Lake Forest, Ill.

Participants: (14)

George R. Bernard
Ivan L. Boyd
Benton W. Buttry
Fr. Eugene W. Denner
Arlan L. Edgar
Mary Gojdics
C. A. Hannum
Donald W. James
Mark M. Keith
Paul A. Meglitson
William Neff
Earl Segal
George A. Vaughan
Mary Weller

University of Notre Dame
Baker University
State U. of S. Dakota
St. Benedict's College
Alma College
Barat College
Univ. of Wichita
Washburn University
Univ. of Minnesota (Duluth)
Drake University
Knox College
Kansas St. Teachers College
Central College
Clarke College

Notre Dame, Ind.
Baldwin, Kansas
Vermillion, S. D.
Atchison, Kansas
Alma, Michigan
Lake Forest, Ill.
Wichita, Kansas
Topeka, Kansas
Duluth, Minnesota
Des Moines, Iowa
Galesburg, Ill.
Emporia, Kansas
Fayette, Missouri
Dubuque, Iowa

The subject considered was the integration of courses, particularly comparative anatomy and embryology.

In the discussion it was brought out that integration of these two courses is desirable because of the overlapping of material makes each dependant on the other, and the students would get more out of the two if they were together than they do now when they are taught separately. The eight credit value usually given the two courses would be more efficiently used.

The reasons that more schools do not offer these courses integrated are that at present no adequate text books are available, the medical school specify comparative anatomy as an entrance requirement, and the mechanics are not set up for it.

The current objections may be removed by the appearance of the four textbooks now reported to be in preparation, and by the relaxation of and change in some of the specified requirements of the medical schools which are showing a tendency to demand broader liberal arts training.
Three people present had already taught these as integrated courses and the two plans following were offered by Dr. Bernard, and Dr. Neff respectively:

1. The first semester's work takes in the general features like gametogenesis, cleavages in the starfish, Crepidula, frog, and chick, and the development of these to tubulation. This is followed by the embryology and comparative anatomy of skins and nervous systems. The second semester's work has in it some histology, and the embryology and comparative anatomy of mesodermal and endodermal derivatives. The animals used are shark, Necturus, turtle, pigeon, and the full term fetal pig. The time given is two lecture hours, and two three-hour labs. for the year.

2. The plan is similar, but the shark is being dissected in the lab while the early embryology is being treated in lecture. Instead of frog, the salamander is used.

The majority of the group was in favor of offering this as a year course although two persons felt the need of a single semester's course.

Two plans were suggested for shortened courses by Dr. Meglitsch and Dr. Neff respectively, as follows:

1. Reduce the amount of work done with serial sections and study more whole mounts, and use injected material for the study of the circulatory systems.

2. Rather than develop the whole organism, use some systems, or one system to develop principles and to draw generalities which the student could apply. Very careful selection of sections and other material is needed.
A one semester course may fit very well into a teacher training program where time is limited, but it might be of advantage to follow that up with a second course in mammalian anatomy, it was pointed out, however, that the liberal arts colleges provide more teachers for the secondary schools than do the teacher's colleges, and that in some cases five years are needed for the completion of the preparation with a major in a field of study other than education.

There was also discussion concerning the relative merits of purely technical vs. liberal arts training, and of training for medical schools, or for well trained zoologists who could pursue work in graduate school or in medical research.

Because so many students are undecided about their future plans, it seems best to give them solid training in fundamentals and to trust them to make applications of them when their needs arise. With that in view, the group made the recommendation that this combined course be treated as basic training for the development of zoologists rather than direct it toward any specific technical field.

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Discussion Group #4

A. What constitutes a biological core curriculum? Should it be the same for pre-meds as for other majors?
B. Integration courses for seniors.

Chairman - Ralph P. Frazier, M worms, Illinois.

Recorder - Brother L. George, St. Mary's College, Winona, Minnesota.

Participants (33)
Sister Teresa
Sister M. Ursula
Sister Mary Thomasine
Rev. N. R. Nye
Alice Carlson
Clive Thomas
John M. Hamilton
J. W. Hudson
Ralph P. Frazier
R. Maurice Meyers
Dr. Theodore Urban
L. P. Coenen
Brother L. George
J. Fred Moyer
Arlan L. Edgar
Wendell V. Showalter
Clarence Hams
Fred A. Fleming
O. T. Walter
Farris H. Woods
L. F. Jansen, S. J. (Rev.)
Ronald P. Smith
John R. Cortelyou (Rev.)
Mary A. McWhinnie
Daniel F. Burton
Karl H. D. Beesele

The College of St. Catherine
Mount Mary College
Mount Mary College
Loras College
Central College
William Jewell College
Parks College
Loyola
Mormon
Western Ill. University
Creighton University
University of Detroit
St. Mary's College
College of St. Thomas
Alma College
Hastings College
Tabor College
McKendree College
Macalester College
Central College
Creighton University
Buena Vista College
De Paul University
De Paul University
Mankato State College
University of Omaha

St. Paul, Minnesota
Milwaukee 10, Wisconsin
Milwaukee 10, Wisconsin
Dubuque, Iowa
Pella, Iowa
Liberty, Missouri
Parksville, Missouri
Chicago 26, Illinois
Mormon, Illinois
Macomb, Illinois
Omaha, Nebraska
Detroit, Michigan
Winona, Minnesota
St. Paul, Minnesota
Alma, Michigan
Hastings, Nebraska
Hillsboro, Kansas
Lebanon, Illinois
St. Paul 5, Minnesota
Fayette, Missouri
Omaha, Nebraska
Storm Lake, Iowa
Chicago, Illinois
Chicago, Illinois
Mankato, Minnesota
Omaha, Nebraska