Brother George (St. Mary's) said that the seniors are required to present short papers for discussion at the weekly seminar (source is recent biological journals); a thesis based on personal observation or experimentation; and a three-hour course on the history and philosophy of biology.

Shawhan (Drake) mentioned that all prospective teachers are required to assist in the Freshman laboratory 4 hours each week.

Hudson (Loyola) pointed out the danger of reducing the research work being done to that of dishwashing.

Carlson (Central) said that a 40 minute talk on a library paper which cuts across at least two departments was required of seniors.

Walter (Macalaster) said that they give a reading course to prepare for the graduate record examination.

Meyers (Western Ill.) said that a Senior Tutorial by 8 members of the staff was conducted with 2 sen. hours of credit which did not count on fulfilling their major. In general it consisted in a list of questions given to the student on a given field.

A show of hands indicated that 10 of the 30 schools represented require a thesis or some type of research. About the same number require the graduate record examination.

McWhinnie (DePaul) said that they give a course on the Introduction to Research Instrumentation. The students are shown how to use various instruments and required to do a problem in each. She felt that the undergraduate student was not yet in a position to do what one would call real research. To have some familiarity with the techniques employed in research was considered more to the point.

At the close of the meeting someone asked whether there was such a person as a biologist today. One view expressed was that a negative answer must be given. Biology is a division of sciences and different requirements are necessitated depending upon the future wants of the individual involved.

**SUMMARY OF SATURDAY A.M. DISCUSSION**

Two items of business were conducted as determined by the general meeting held prior to this group meeting. A total of $27 was turned in to help defray expenses of the second annual meeting of the Conference. Dr. Frazier of Monmouth was elected as a member of the steering committee to make arrangements for the next year's conference.

The chairman listed the core curriculum as presented by Dr. Willis Johnson's Committee at the general meeting. It is as follows:

1. General Biology
2. Upper division (areas of content)
   Genetics; growth and development; cell biology; physiology; ecology.

Burton (Mankato) recommended that as wide a range of courses as possible be allowed. The important thing only is that the core areas be covered. Some of these areas could be covered in botany, some in zoology, and some in both.

Hamilton (Park) asked why evolution was not included in the core of upper division subjects. It was answered that this topic was one that was to be covered in the Freshmen Biology Course. Brother George (St. Mary's) noted that many schools
do give this topic special consideration in the Senior Integration course.

Cortelyou (DePaul) suggested that a course in biological chemistry and physics might be given in the second semester of the Freshmen year as a background for the upper division core. He noted that it is only in the Junior year than many of the biology students get the physics and chemistry that should be used in upper division biology courses. At the present time the biology teacher must take out time during a biology course to teach physics and chemistry. A considerable discussion followed. One possible solution was the starting of Organic Chemistry earlier. It was noted that some schools in the country are giving Organic in the second semester of the Freshmen year pushing back qualitative analysis. It was noted that biology departments might judiciously suggest to chemistry departments the possibility of revamping their curriculum as noted above. This would be in view of the good of the chemistry department itself and not as a mere service to the Biology department.

McWhinnie (DePaul) noted that there were now other instruments besides the microscope that are serving as tools in modern biology. In order to teach present-day biology the student has to have experience with these tools. This should be gotten before the upper division courses are taken.

Grimm (Bradley) thought that the graduate school is the place for the study of instrumentation. Here is where these tools will be used.

Rev. Cortelyou (DePaul) noted that medical schools complain about the weakness of the Liberal Arts colleges as far as the Cellular Physiology courses they offer. It is due to a lack of experience in the handling of instruments.

Burton (Loras) was opposed to the requirement of a knowledge of instrumentation for all.

Rev. Nye (Loras) noted that small schools don’t have all these instruments. He thought that perhaps acquainting the student with the fact that such instruments do exist might be sufficient. The student might be told that the physics and chemistry departments have such apparatus.

McWhinnie (DePaul) said that the plea for such a course was as a stopgap until such time that the student would have been exposed to these instruments in physics and chemistry.

Several members of the group thought that specific mention might be made of skills and techniques that upper division biology majors should be expected to master. Specifically, the use of the library, was given particular prominence.

Anderson (Bethel) suggested a two-way grid for the advanced courses. It is as follows:

- **Skills and Techniques**
  - **Areas of Study**
    - Genetics
    - Development
    - Cell Biology
    - Physiology
    - Ecology
    - Library

Grimm (Bradley) said that the Senior Integration course could help to fill the gaps still left after the completion of course work.
Sister Teresita (St. Catherine) recommended to the steering committee that it have more definite or specific topics for discussion at the next meeting.

At the close of the discussion the following list of recommendations was drawn up by the group to be presented to the entire conference.

1. The core curriculum suggested by Willis Johnson's committee be accepted with some additions as are to be noted in the additional recommendations.

2. Evolution be added to the areas of study on the advanced level.

3. Exposure to instrumentation besides microscopy, skills, techniques, and use of the library be included in work on the advanced level.

4. A senior seminar integration course which would include not only the field of biology per se, but also its relationship to other fields of knowledge.

CONFERENCE ON WOMEN'S BIOLOGY TEACHERS
October 25-26, 1957
Drake University, Des Moines, Iowa

Discussion Group #6
The nature and kinds of biology courses offered by Colleges of Liberal Arts for Diploma Schools of Nursing.

Chairman: Elmer J. Cloutier, The Creighton University, Omaha, Nebr.

Recorder: Margaret Peters, DePaul Hospital School of Nursing, St. Louis, Mo.

Participants: (8)

- Elmer J. Cloutier
- Margaret Peters
- David A. Yos
- Edward C. Hickey
- Jane Marie Meyer
- David L. Tingle
- James S. Summers
- William L. Frantz

The Creighton University
DePaul Hosp. School of Nursing
Burlington College
Clinton Jr. College
Luthern Hospital
Marshalltown Jr. College
William Woods Jr. College
Drake University

Omaha, Nebr.
St. Louis, Mo.
Burlington, Iowa
Clinton, Iowa
St. Louis, Mo.
Marshalltown, Ia.
Fulton, Missouri
Des Moines, Iowa

By comparing programs and noting the variety of types and lengths, it was evident that there was a need for further discussion and investigation.

There was much discussion, however all felt the need of a resource person from the National League of Nursing so there would be an understanding between the colleges presenting the programs and the hospital situation. Some schools use the National League Achievement Tests at the conclusion of their courses, others knew nothing about them. Some schools have a coordinator from the hospital but feel this is inadequate since they do not understand the full nursing program and its educational standard. There was a need for defining accreditation. In view of all this confusion it was recommended the following summary be submitted.

Course Content-Suggestions

Conclusions are:

I. Recommended a spring meeting be called the Mississippi Valley Conference on Accreditation and Nursing Education for 3 Year Schools. Call in resource people from