

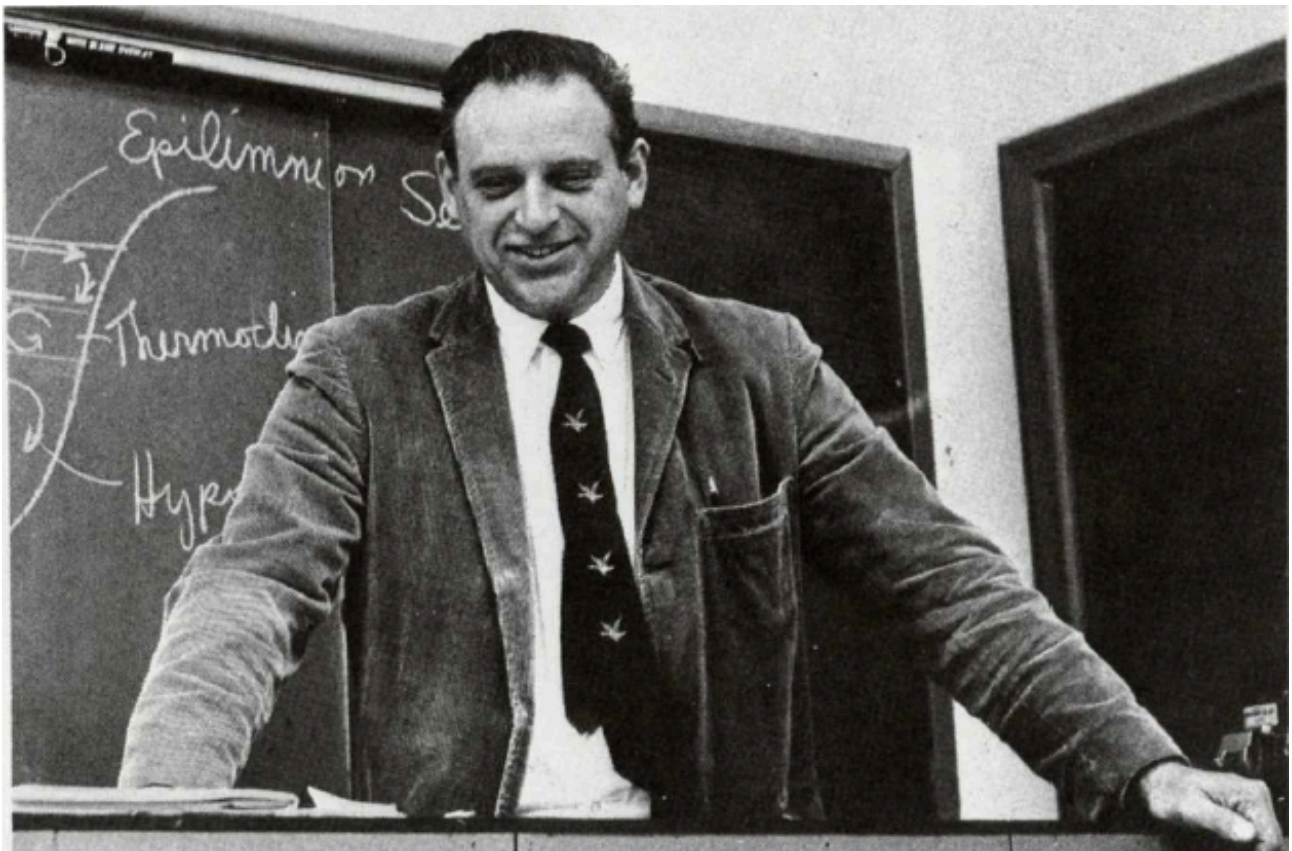
Howard E. Woodin: The Father of Environmental Studies

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Howard Woodin, 1969. Source: *Middlebury College Kaleidoscope*, 1969

Introduction

Howard Eugene Woodin began his Middlebury College career in 1953 as an Instructor in Botany. He earned promotion to the rank of Assistant Professor of Botany in 1956.¹ He then became an Associate Professor of Biology in 1962.² Woodin achieved full professorship as Professor of Biology in 1967.³ During the 1962-63 academic year, he was the acting chairman of the Biology department, a position he assumed while another professor was on academic leave.⁴ It is possible that Professor Woodin valued the ability to make changes to the Biology curriculum while acting as the department chair, inspiring him to one day create a program of studies that aligned with his educational beliefs. This opportunity would later be afforded to him as the Director of the Environmental Studies (ES) program.

In addition to his duties as a professor and two stints as chairman of the Biology department, Woodin also served on the Faculty Educational Policy Committee (FEPC), a position held for three years at a time. The purpose of the FEPC was to consider “the major educational objectives of the college and ways in which the curriculum and academic organization can best implement these aims.”⁵ The time served on the Committee, in addition to assuming the Biology department chair, likely influenced him in developing the ES program.

From the time he arrived at the College in 1953 until the Environmental Studies program began its inaugural year in the fall of 1965, Professor Woodin taught a variety of courses within the Biology department, including classes in botany and ecology. During this pre-Environmental

¹ “Eight of Faculty Named to Full Professorships,” *The Middlebury Campus*, February 23, 1956.

² “Faculty Promotions,” Middlebury College News Letter, Summer 1962. July 1, 1962.

³ Middlebury College Board of Trustees Meeting Minutes, May 25, 1985, pages 2018-2019. Middlebury, Vermont.

⁴ “15 Join College Faculty; Varied Changes Made,” *The Middlebury Campus*, September 19, 1963.

⁵ “FEPC,” *The Middlebury Campus*, September 22, 1960.

Studies period, he taught: Botany, General Bacteriology, Plant Morphology, Plant Morphology and Taxonomy, Principles of General Ecology, Zoology, General Biology, Plant Anatomy and Physiology, as well as various courses in Independent Study, Research and Thesis work, and Advanced Study.^{6, 7}

Though he was a botanist by trade, Woodin demonstrated a forward-thinking curiosity that reflected emerging nationwide concern about the environment and its response to technological advances and human population growth. Many of his academic interests and normative beliefs about education – such as climate change and population growth, equal education for women and the value of small seminar classes – ultimately led to the creation of the Middlebury College Program in Environmental Studies, and many staples of the Program that still exist today.

Pioneer

Howard Woodin became interested in the ecological ramifications of human activity long before the sweeping environmental concern of the 1960s. In an attempt to better understand these consequences, he conducted unprecedented academic experiments to measure environmental changes over time. One such example was his timberline project on Mount Marcy, New York. In September 1957, Professor Woodin led a group of students to study the peak's timberline.⁸ Measurements were recorded so that future class expeditions could return to the mountaintop site and measure climatic changes over time. Woodin believed his expedition had laid the first transactor (a tool used to gather data) in an alpine area. When asked about his work on Marcy's

⁶ Middlebury College, Reports of the Registrar, 1953-54 through 1964-65. Middlebury, Vermont.

⁷ Middlebury College Bulletin, Catalogue Numbers 1953-54 through 1964-65.

⁸ Carol Schraft, "Woodin Climbs Mt. Marcy, Gets Data for Geophysical Year," *The Middlebury Campus*, September 19, 1957.

summit, he explained, “You do this for something to do and because nobody’s done it before.”⁹ This experiment demonstrates that Woodin was thinking about climate change as early as the 1950s.

Collecting data from mountaintops to measure climate change was not the only way in which Professor Woodin was an innovator. He was also the first to measure eutrophication using a particular technique. During the summer of 1960, he led an expedition to measure trophic levels in High Pond, Vermont.¹⁰ He pioneered the tracer-element method of measuring photosynthetic activity, and believed his foray to be the first attempt to measure the trophic level of a pristine Vermont lake using this method. Beyond this experiment, Professor Woodin was instrumental in the development of High Pond “as a center of research and study of ecology.”¹¹

Woodin’s innovative methods of study and ecological analysis distinguished him from his academic colleagues. He furthered this distinction when the Ecological Society of America certified him as a senior ecologist in July 1982, and became among the first group to be so designated.¹² While this certification came toward the end of his Middlebury career, it offered further validation of his role as a progressive scholar.

Another way in which Woodin demonstrated his leadership and foresight was advocating for the construction of a College greenhouse, and the way he organized fundraising for the project. Woodin recognized the need for an on-campus greenhouse in order to undertake and complete a greater number of experiments in his botany classes. He also believed the new facility

⁹ Carol Schraft, “Woodin Climbs Mt. Marcy, Gets Data for Geophysical Year,” *The Middlebury Campus*, September 19, 1957, page 8.

¹⁰ “Measuring Trophic Levels in a Pure Pond,” Middlebury College News Letter, Summer 1970, Parents Edition. July 1, 1970.

¹¹ Middlebury College Board of Trustees Meeting Minutes, May 25, 1985, page 2019. Middlebury, Vermont.

¹² “All Things Considered,” Middlebury College Magazine, Winter 1982. January 1, 1982.

would allow professors to alter the content of many upper level Biology courses, particularly those in plant physiology. Woodin explained, “We have never been able to do as much in plant physiology as we would like. Now the greenhouse makes possible a lot more intensive study in that field.”¹³ He organized and guided a student committee that was responsible for raising the necessary funds to begin greenhouse construction. The greenhouse, which connected to the west side of Warner Hall, still stands today. Its construction was not only significant in that it stimulated advances in the Biology curriculum, but also in that it sparked an increased student interest in ecology.

Woodin’s importance to the College community transcended the Biology department. In 1958, an article written by a Syracuse University professor proposed that collegiate women be sacrificed (not allowed to attend) due to an increase in enrollment and subsequent crowding at colleges. When asked by *The Middlebury Campus* to give his thoughts on the article, Professor Woodin responded, “Education shouldn’t be denied to any good mind because of sex.”¹⁴ Though the response to the article among the Middlebury College community was one of general disagreement, it proved that this was a non-trivial sentiment at the time at other post-secondary educational institutions. Professor Woodin’s insistence on women’s inclusivity at the College proved to be vital to the Environmental Studies curriculum, as many professors and instructors affiliated with the department today are women, as were the first three students to graduate with a degree in Environmental Studies.¹⁵

¹³ “Student, Faculty Efforts Help Realize Greenhouse for Development Program,” Middlebury College News Letter, November 1955. November 1, 1955, page 4.

¹⁴ George Logan and Susan Andrews, “Elimination of Women Seen ‘Ridiculous,’ ‘Insulting,’” *The Middlebury Campus*, March 13, 1958.

¹⁵ Middlebury College, Reports of the Registrar, 1968-68 & 1969-70. Middlebury, Vermont.

Woodin was a Biology professor who specialized in botany, but he also proved to be a savant of global population trends and an intellectual harbinger for later works about the perils of overpopulation. In an article published in *The Middlebury Campus* in May 1959, Woodin combined alarming statistics with witty sarcasm to warn of imminent future devastation due to massive increases in worldwide population. In it, he wrote, “We are in the midst of an explosion! We are not only being affected by it but are the primary cause of it, and instead of dampening it we are adding to its intensity as if we were wholeheartedly bent on race extermination. The human populace of the world is expanding at a rate which, in a few years, will dwarf the hydrogen bomb in the misery and suffering it will cause.”¹⁶ Woodin channeled the theories of English scholar Thomas Robert Malthus in predicting widespread disaster due to population growth. Simultaneously, Woodin also penned a precursor to Paul Ehrlich’s famous book, The Population Bomb, written nine years later in 1968. It is evident from his *Campus* opinion piece that Professor Woodin was thinking about the relationship between environmental quality and human population long before the Environmental Studies program was born.

Environmental Studies Curriculum

Professor Woodin originated his proposal for a program in Environmental Studies based on “the science center concept and the especially favorable conditions for environmental study around Middlebury.”¹⁷ These favorable conditions were evident through his academic excursions to Mount Marcy and High Pond. Woodin was acutely aware of the growing need for experts to identify what could be done about environmental hazards. Speaking during his 1970 expedition to High Pond, he remarked, “All of a sudden the country’s waking up to their pollution problem,

¹⁶ Howard E. Woodin, “Woodin Says World Population Increase Means Extermination,” *The Middlebury Campus*, May 7, 1959.

¹⁷ “Joint Major in Ecology to Be Offered,” *The Middlebury Campus*, May 27, 1965, page 1.

and they're turning to the biologists and demanding instant answers. The fact is we don't have them. Less than ten years ago nobody was an "ecologist" – it's a brand new discipline."¹⁸ The Environmental Studies major was officially approved at a faculty meeting on May 3, 1965.¹⁹ Any student who registered as an ES major concentrated on one of three specific areas of study: earth science, ecology, or human ecology. These foci represented an ES major with a special emphasis on geology, biology, and geography, respectively. The Environmental Studies major was intended to be an interdisciplinary program, designed to "take full advantage" of the opportunity that Middlebury's unique locale provided for fieldwork in the areas of concentration.²⁰ It is evident that Middlebury's ecological landscape played an important role in beginning and developing an interdisciplinary environmental studies program.

Woodin's involvement with the ES program did not end with its creation in 1965. In an October 1968 letter, Dr. James I. Armstrong, then-President of the College, asked Woodin to be the director of the newly approved program.²¹ He would remain the Director of Environmental Studies until his retirement in 1985.

The courses that Professor Woodin taught after the ES program's inception reflected not only his importance to its creation, but also his keen interest in the subject matter. His classes from 1966 until his retirement in 1985 included: General Ecology, Ecosystem Analysis, various upper level courses in research and thesis work, and a course called Environmental Science in

¹⁸ "Measuring Trophic Levels in a Pure Pond," Middlebury College News Letter, Summer 1970, Parents Edition, July 1, 1970, page 52.

¹⁹ "Joint Major in Ecology to Be Offered," *The Middlebury Campus*, May 27, 1965, page 14.

²⁰ Middlebury College Bulletin, Catalogue Number 1955-56

²¹ Stephen C. Trombulak, "History of the Environmental Studies Program." Middlebury College, Middlebury, VT. Received April 30, 2015.

the newly-formed Natural Sciences department.^{22, 23} Woodin's Environmental Science course eventually became Natural Science and the Environment, the introductory level Environmental Studies lab course required for all ES majors today.

Legacy

Howard Woodin retired from teaching at the College at the conclusion of the 1984-85 academic year, whereupon he became a professor Emeritus.²⁴ Though he last taught more than thirty years ago, Professor Woodin left an indelible mark on the College community, especially the Environmental Studies and Biology programs. Today, Middlebury's Program in Environmental Studies is the longest-running undergraduate environmental studies program in the country.

Professor Woodin's preference for classes with small enrollments was perhaps a precursor to what is now the Environmental Studies Senior Seminar, a required course for all Environmental Studies majors regardless of focus discipline. He valued small classes where students and professors shared a close working relationship, and where students could actively engage in the material being presented. In 1967, while Woodin was chair of the department, the Biology curriculum was adjusted to offer a greater number of small, seminar-type courses. This allowed students to work more independently, and in some cases to teach themselves under faculty supervision.²⁵ Today's ES Senior Seminar is structured in much the same way, requiring

²² Middlebury College, Reports of the Registrar, 1966-67 through 1984-85. Middlebury, Vermont.

²³ Middlebury College Bulletin, Catalogue Numbers 1966-67 through 1984-85.

²⁴ Travis Beal Jacobs. *General Catalogue of Middlebury College, Bicentennial Edition*. Middlebury, Vermont: Middlebury College Press, 2000.

²⁵ Peter Delman, "Emphasis Placed On Developing "Human Base" In Science Expansion," *The Middlebury Campus*, October 26, 1967.

students to work collaboratively with each other and with the professors on a semester-long environmental project.

Another lasting part of Professor Woodin's legacy is a tradition of environmentally related lectures given on campus. The Howard E. Woodin ES Colloquium Series, as it is known today, "brings together students, faculty, staff, and members of the community to hear from a broad range of speakers...on conservation and environmental topics."²⁶ The foundation of environmental lectures on campus can be traced back to 1960, when Professor Woodin gave a talk titled, "Biological Effects of Radiation," the first of four lectures open to the entire College community that academic year.²⁷ It is significant that this lecture series was given in 1960, amidst the Cold War and in a time of growing concern about nuclear fallout. Organizing this lecture (and ostensibly, several others) demonstrated Woodin's forward thinking about the environmental ramifications of increasing human use of technology. Finally, that today's Colloquium Series is named in his honor speaks to his importance to the ES program.

Conclusion

Middlebury's Program of Environmental Studies continues to be greatly influenced by Howard Woodin thirty years after he retired from teaching at the College. Men and women from across the nation and the world have graduated from Middlebury with degrees in Environmental Studies, guided by a curriculum shaped by Woodin's ambitions, academic interests and foresight. Professor Woodin's unprecedented academic experiments, trendsetting lectures, moral beliefs about higher education and desire for innovation within the College's academic environment all contributed to his development of the nation's first undergraduate

²⁶ Middlebury College. "Howard E. Woodin Colloquium Series." Accessed May 3, 2015. <http://www.middlebury.edu/academics/es/news/woodincolloquiumseries>

²⁷ "Woodin Lecture," *The Middlebury Campus*, October 27, 1960.

Environmental Studies program. In addition to profoundly impacting the College community, Middlebury's ES curriculum would "become a model for similar programs at other colleges."²⁸ His vision of furthering ecological understanding altered the landscape of collegiate curricula. In this way, Howard Woodin can be regarded as the father of environmental studies.

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* Provided by Professor Kathryn Morse

I have neither given nor received unauthorized aid on this assignment.

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²⁸ Middlebury College Board of Trustees Meeting Minutes, May 25, 1985, page 2019. Middlebury, Vermont.