



Summer 8-12-1996

## National Science Foundation Awards IWU Grant For Equipment To Probe Pesticide Levels

Bob Aaron  
*Illinois Wesleyan University*

Follow this and additional works at: <https://digitalcommons.iwu.edu/news>

---

### Recommended Citation

Aaron, Bob, "National Science Foundation Awards IWU Grant For Equipment To Probe Pesticide Levels" (1996). *News and Events*. 6653.  
<https://digitalcommons.iwu.edu/news/6653>

This Article is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact [digitalcommons@iwu.edu](mailto:digitalcommons@iwu.edu).

©Copyright is owned by the author of this document.

August 12, 1996

Contact: Bob Aaron, 309/556-3181

## **National Science Foundation Awards IWU Grant For Equipment To Probe Pesticide Levels In Migratory Birds, Other Studies**

BLOOMINGTON, Ill.--The National Science Foundation (NSF) has awarded Illinois Wesleyan University a \$90,000 grant to purchase scientific equipment earmarked for experiments to pinpoint pesticide levels in migratory birds and other environmental studies.

IWU will match the grant with another \$42,000 to purchase three gas chromatographs.

"The gas chromatographs," explained R. Given Harper, IWU assistant professor of biology and the project's principal investigator, are sensitive instruments, "and can determine--even in the parts-per-billion range--pesticide levels in samples."

The instruments will be used to determine organochlorine levels--levels of chemicals like DDT--in migratory song birds that nest in North America and winter in Central and South America.

Co-principal investigators are Jeff Frick, IWU assistant professor of chemistry, and Timothy Rettich, IWU associate professor of chemistry. Frick will supervise equipment usage. Rettich will use the instruments for another environmental research project involving contaminants associated with acid rain.

Harper and Frick expect delivery of the instruments during the fall semester. Once the equipment is set up, there no longer will be a need to send samples to a Peoria laboratory for analysis. Samples are typically collected as the result of birds flying into windows, TV towers, and other structures--especially during foggy nights--while on their migratory travels.

"It's astounding," Harper said, "but on one foggy night in Champaign County about 500 birds were found dead under one tower."

Harper and Frick's studies of pesticides in migratory birds are a collaborative effort involving Angelo Capparella, Illinois State University assistant professor of biology and a bird taxonomist, and IWU students. Harper and Frick also are working with the U.S. Fish and Wildlife Service.

(more)

## **IWU Receives NSF Grant/2**

"The birds we're studying," Harper explained, "are not endangered species, but population declines are showing and some biologists are concerned."

Research conducted over two and one-half years will result in publication of a paper in the "Archives of Environmental Contamination and Toxicology" later this year or early next year. The paper is co-authored by Harper, Frick, Capparella, and two IWU graduates who worked on the project as undergraduate students: Birthe Borup, a 1995 IWU chemistry graduate, who is working on a doctorate in environmental chemistry at Pennsylvania State University, and Mieka Nowak, a 1996 IWU chemistry graduate, who is working on an occupational therapy degree in the Chicago area.

"A big benefit of this type of research for students," Harper said, "is that it gives them the necessary experience to pursue graduate degrees. Without this experience, they would not be able to go directly from an undergraduate to doctoral program."

Harper and Frick foresee other research papers being published in scientific journals as the project unfolds.

Project research began about three years ago after an IWU chemistry student approached Harper looking for an environmental research project.

"We looked at the literature," Harper recalled, "and found that virtually nothing was published about pesticides in song birds at a time when the topic of pesticides is in the forefront.

"What's interesting," Harper continued, "is that no one has any real hard evidence that pesticides have led to population declines of birds--but there is concern. The pesticide, DDT, for example, has been banned in the United States. However, U.S. corporations export it to other parts of the world, but it comes back to the U.S. and we're finding traces in wildlife. In our paper that has been accepted for publication, we found detectable pesticide levels in 19 of 21 migratory song birds. We don't know if the levels we're finding are harmful. That's the subject of future research."

From Harper's vantage point, he sees widespread interest in the environment among college students. "What's driving it," he opines, "is the dismal state of the environment in many parts of the world. Pressures on the environment already are affecting humans and students are concerned. For example, some pesticides can mimic hormones and can certainly impair normal embryonic development and reproduction."

NSF received 109 instrumentation proposals in the biological sciences under the

(more)

## **IWU Receives NSF Grant/2**

Academic Research Infrastructure Instrumentation Award (ARI) program. Those proposals totaled \$38.8 million.

In a letter to Harper, informing him that IWU's proposal was funded, NSF officials pointed out that: "Since only \$9.4 million is available for support of ARI instrumentation proposals in the biological sciences, the competition was intense."

"This is a wise use of taxpayer dollars," Harper said, referring to the NSF program "since it provides funds for equipment that supports research opportunities for students and those research opportunities will shed some light on potentially important environmental problems."

IWU, founded in 1850, enrolls about 1,850 students in a College of Liberal Arts, College of Fine Arts, and a four-year professional School of Nursing. A \$15 million athletics and recreation center opened in the fall of 1994; and a \$25 million science building opened in the fall of 1995. The Carnegie Commission for the Advancement of Teaching promoted Illinois Wesleyan to a "Baccalaureate I" institution in 1994, a classification that places it among 161 highly selective National Liberal Arts Colleges in the annual *U.S. News & World Report* rankings. *Barron's Profiles of American Colleges*, another respected college guide, rated IWU "highly competitive (+)" in its latest edition.