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**Frontmatter & Contents for *Proceedings of the Fourth Eastern Pine and Meadow Vole Symposium, February 21-22, 1980***

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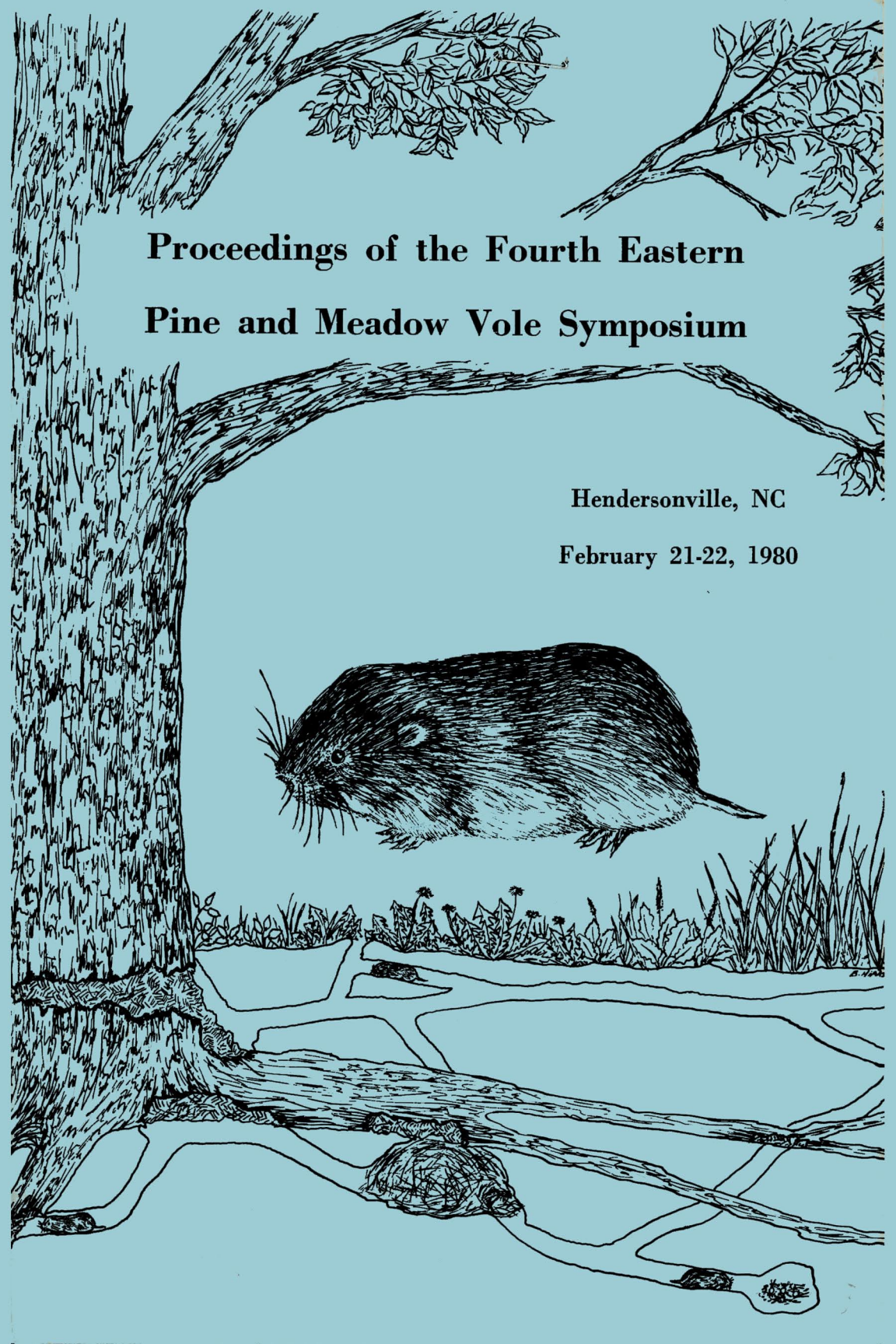
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**Proceedings of the Fourth Eastern  
Pine and Meadow Vole Symposium**

**Hendersonville, NC**

**February 21-22, 1980**

**PROCEEDINGS OF THE  
FOURTH EASTERN PINE AND  
MEADOW VOLE SYMPOSIUM**

Hendersonville, NC  
February 21-22, 1980

**EDITOR**  
**ROSS E. BYERS**

**1980**

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*Editor's note: The papers in the Proceedings appear as  
originally written.*

## HIGHLIGHTS OF THE FOURTH EASTERN PINE AND MEADOW VOLE SYMPOSIUM

The Fourth Eastern Pine and Meadow Vole Symposium was held in Hendersonville, North Carolina February 21 and 22, 1980 for the primary purpose of assessing the current status of research and extension programs relating to the problem of vole damage to fruit trees. The meeting was designed to be informative and to create an atmosphere whereby growers and various agencies such as EPA, USDA, USDI, the chemical industry and university personnel could observe the current thrust of vole research programs and their potential impact on future control methods.

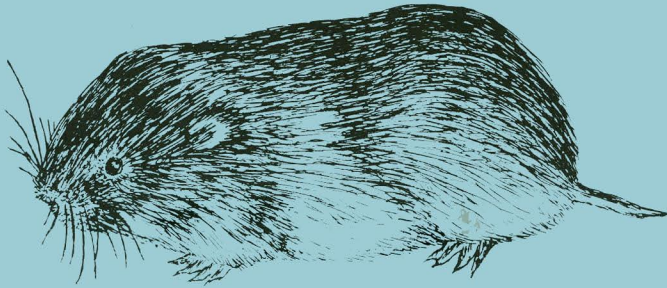
By the time of the 1980 meeting approximately \$1 million dollars in USDI contracts for vole research had been dispensed and research from this new funding base had resulted in new information being generated. The meeting provided an excellent opportunity for all attending to be informed concerning the breadth and depth of various research efforts.

Growers representing the North Carolina apple industry reiterated the great value of Endrin ground cover sprays for the control of orchard voles. Apparently the Endrin resistance problem has not been a serious problem as viewed by growers in that state. A tour of the North Carolina State University research plots by Dr. Donald Hayne and Mr. Bill Sullivan was well attended and local arrangements by Dr. Mel Kolbe were appreciated. In addition, the new vole research facilities were shown at the North Carolina State University Mountain Crops Research Station at Fletcher, North Carolina.

Within the geographic range of the pine vole, control measures used by growers are in a state of flux from one region to another. This appears largely due to differences in the Endrin resistance problem. Toxicants, however, appear to remain as the least expensive, most effective control method for controlling serious vole infestations. Supplemental cultural control methods (cultivation, herbicides, and mowing) have been found both beneficial and expensive. Reports on the federal clearance of a new and more effective Zn Phosphide formulation has resulted in a new use for an old toxicant.



Prairie vole - Microtus ochrogaster (Wagner)



Pine vole - Microtus Pitymys pinetorum (LeConte)



Meadow vole - Microtus pennsylvanicus (Ord)

B. HAASEN