

# Ruth Allen Award

The Ruth Allen Memorial Fund was established in 1965 by gifts from the estate of Dr. Ruth Allen through the generosity of her heirs: Sam Emsweller, Mabel Nebel, Hally Sax, and Evangeline Yarwood. The award, consisting of a certificate and income from the invested fund, is given for outstanding contributions to the science of plant pathology.

## Hedwig H. Triantaphyllou



**Hedwig H. Triantaphyllou** was born in Germany. She received her B.S. and Ph.D. degrees at the University of Erlangen, Germany, where she remained for 3 yr on a postdoctoral appointment, investigating nematode taxonomy and the community structure of Bavarian lakes and forests. She joined the Department of Plant Pathology at North Carolina State University, Raleigh, in 1954 and commenced her 37 yr of teaching nematode taxonomy and morphology. Although officially retired from her position at N.C. State, she continues her research.

As indicated in a Susan B. Anthony brochure, Hedwig Triantaphyllou was named the fourth woman professor at N.C. State. In keeping with that, it was reported that during a hotel stop-over enroute to the 1958 Golden Jubilee APS Meeting, the reservations clerk had arranged for the N.C. State delegation to share rooms alphabetically, which paired Dr. Hedwig Hirschmann with Dr. Teddy Hebert. Dr. Hebert responded "Great! That is great!" Hedwig's response, however, was an adamant "NO!", in both English and German.

## A. C. Triantaphyllou



**A. C. "Tasso" Triantaphyllou** was born in Greece. He received his B.S. and M.S. degrees from the College of Agriculture, Athens, Greece, and his Ph.D. degree in plant pathology from North Carolina State University, Raleigh. Dr. A. C. Triantaphyllou's career in nematology began when he was employed as a plant nematologist at the Benaki Phytopathological Institute in Athens and continued in 1960 when he returned to North Carolina State University. After 31 yr, A. C. Triantaphyllou retired from his position at N.C. State, but he too

remains active in research.

As a graduate student in one of his first mycology labs with the distinguished mycologist, Dr. John Couch, while checking Tasso's slide Couch asked him "Did you step on that slide?" Having only worked on nematodes to that point, Tasso asked "Does that actually help one to see fungi?"

As a husband-wife team, Tasso and Hedwig have been uniquely successful in collaborative and independent research. The Triantaphyllous' incisive insight and concern for precision, combined with a keen understanding of the diverse aspects of biology, resulted in two of the most respected research programs on plant-

parasitic nematodes in the world. Their individual and collaborative research and that of their students bears marks of unmatched quality and excellence.

Dr. Hedwig Triantaphyllou's research contributions focused on plant-parasitic nematode systematics/taxonomy, morphology, and fine structure. Much of her work was directed toward enhancing our understanding and clarification of the taxonomic and phyletic relationships of the root-knot and cyst nematodes. Various modern approaches, including electron microscopy, cytology, biochemistry, and host specificity, as well as conventional taxonomic methodology, were utilized in these studies. The collaborative efforts of the Triantaphyllou team facilitated this integration of classical taxonomy with modern genetics and biochemistry and set new standards for differentiation of species, host races, and biotypes of these important plant pathogens.

Dr. A. C. Triantaphyllou's research accomplishments have been in nematode cytogenetics, development, and biochemistry. His in-depth research on the chromosomal complements of root-knot and cyst nematodes has provided information about their karyotypes, including the degree of ploidy, DNA content, and chromosome behavior. His cytogenetic analyses were invaluable in elucidating the phylogenetic relationships of cyst and root-knot nematodes.

Dr. A. C. Triantaphyllou developed an extensive collection of inbred lines and crosses of *H. glycines* suitable for classical and molecular genetic research. His research revealed the presence of three groups of genes for parasitism that act quantitatively and control the ability of races of *H. glycines* to reproduce on resistant cultivars. This new information on the genetics of parasitism has been valuable in understanding race formation in this pathogen and the development and management of related host resistance.

The quality and significance of the Triantaphyllous' research are widely recognized throughout the scientific community. Each has been elected a Fellow of the Society of Nematologists. The research on cytogenetics, development, and biochemistry of nematodes was supported by the National Science Foundation for 27 consecutive years. The Triantaphyllous' many diverse contributions on nematode taxonomy, genetics, and biochemistry were critical to the development of the widely recognized and highly successful international nematology projects directed by J. N. Sasser at N.C. State. The Triantaphyllous provided invaluable training for collaborating researchers from many of the 70 developing countries participating in those projects.

This husband-wife team, through uniquely synergistic scientific programs, contributed much toward the advancement of nematology, plant pathology, and genetics over the past four decades. Their findings brought a new direction and dimension of information and understanding to the basic discipline of nematology, as well as to plant pathology, genetics, biology, and agriculture. Through their truly elegant research, which is characterized by innovation, dedication, and extreme care, the Triantaphyllous have provided key fundamental approaches and concepts that will greatly facilitate the implementation of molecular and genetic engineering technology in nematological research.

This Ruth Allen Award is presented to Drs. Triantaphyllou for excellence and teamwork in science.