

A well-deserved honour to Douglass R. Miller in ISSIS-XI (September 2007, Portugal, Lisbon)

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Introduction

The International Advisory Committee of ISSIS agreed that the XI International Meeting in Portugal recognise and honour Douglass R. Miller for his outstanding contribution to scale insect studies. It is our great privilege, on behalf of all our colleagues, to explain why Dug fully deserves this honour.

Dug was born on February 15, 1942 at Monterey Park Hospital, California, and it was in the Los Angeles region where he grew up. He was interested in insects from an early age and collected them with his high school friend Mike Irwin. This was evidently an early indication of Dug's future interests in entomology. Dug studied at the University of California, Davis, gaining his BS in 1964 and MS in 1965. He worked on his PhD from 1965 to 1969 under the supervision of Howard L. McKenzie and gained his degree of PhD in 1969. Soon afterwards he was appointed Research Entomologist in the Systematic Entomology Laboratory at the U.S. Department of Agriculture in Washington D.C. until the department moved to Beltsville in Maryland, its present location.

It was at university where Dug met Judy and they were married in August 1964 at Carmel. Judy was very supportive of Dug's professional career and often accompanied him on his collecting trips until her untimely death in 2004. Many of us will remember with great pleasure the Miller's hospitality at their home, widely known as The Miller Hotel, and at their other retreat, usually known as Bugs Inn, in West Virginia.

Dug's job at the Systematic Entomology Laboratory was a demanding one. Until his retirement early in 2007 he was responsible for curating possibly the world's largest collection of scale insects (belonging to the USNM), keeping up to date what is certainly the largest library of scale insect literature, research on scale insects and a continual flow of identifications and requests for information, all which he has done with calm and good humour. From 1969 to 1974 and again from 1985 to 1993, Dug served as Unit Leader for the Sternorrhyncha Section and for thrips and mites. It is estimated that Dug made more than 10,000 identifications of scale insects comprising more than 200,000 specimens. He has been particularly interested in invasive species in the U.S.A. providing valuable information to his government. We have all been amazed at Dug's constant flow of research publications now totalling more than 130 papers and books. Dug's systematic research has centred on the scale insect families Diaspididae, Eriococcidae and Pseudococcidae, although he readily admits that armoured scales are not his favourite subjects. His taxonomic knowledge, however, extends to all scale insect groups, and to immature as well as adult female scale insects. Dug's publications include several large monographs, including his most recent, very beautiful, tome 'Armored Scale Insect Pests of Trees and Shrubs', co-authored with John Davidson in 2005.

Doug has always had a particular penchant for the Eriococcidae and his important works on this family include:

1967 - A systematic study of *Ovaticoccus* (with McKenzie)

1975 - Eriococcidae of Chile (with Gonzalez)

1992 - and 1993 Eriococcidae of United States (with Gary Miller)

In addition to descriptions of many new taxa, Dug has been involved in systematic revisions of world-wide and regional groups resulting in the following 10 comprehensive publications:

1974 – *Ceroplastes* in the United States (with Gimpel and Davidson)

1975 – The mealybug genus *Heterococcus*

1976 – The mealybug genus *Stemmatomerinx* (with Howell)

1977 – The armoured scale genus *Hemigymnaspis* (with Davidson)

1981 – The armoured scale genus *Crenulaspidotus* (with Davidson)

1995 – The family Micrococcidae (with Williams)

1996 – The mealybug genus *Trabutina* (with Danzig)

1996 – *Pseudococcus maritimus* complex (with Gimpel)

2000 – *The genus Ortheziola* of the world (with Kozár)

2006 – The armoured scale genus *Furcaspis* (with Williams)

Dug was one of the first to use a holistic approach to Coccoidea research, utilizing combined data gathered from life history, biogeography, field characteristics, scanning electron microscopy, and morphology of adult males and immatures, as well as of the adult female.

Dug's catalogues on the family Eriococcidae published in 2000 and on eight of the smaller scale insect families published in 2005 are widely used by anyone interested in scale insects. We await his final volume on the subfamily Diaspidinae, now in press, with great anticipation.

Among Dug's many professional awards are the C.V. Riley Award for Excellence given for Dug's critical and unique leadership in revitalizing his Laboratory and establishing a national agenda for systematic entomology. He also received the L.O. Howard Award, from the Eastern Branch of the Entomological Society of America, awarded each year to one member for outstanding achievements.

A sign of Dug's recognition by colleagues around the world is evidently indicated the more than 12 species and genera of insects named after him.

We have all been grateful that Dug established The Coccidologist's Newsletter in 1973 (later renamed *The Scale*). These annual publications have kept us all up to date with the latest scale insect news and publications. Scale insect workers are lucky in having the Internet website called **ScaleNet**. This was first established by Yair Ben-Dov, Dug and Garry Gibson in 1994 to provide comprehensive information on scale insects including systematics, biology, geographical distribution, host plants, natural enemies and publications. Information on all the 28 scale insect families, extant and fossil, are now fully covered and accessible free to anyone interested in the group. We all wonder now how we would cope without this most useful tool. During Dug's professional career we remember with gratitude his valuable help and advice given with remarkable patience at all times, and his kindness and generosity with everyone. These are attributes that we admire.

How does Dug relax? He has always been a keen swimmer and even before studying at university he was a lifeguard. Until he developed back trouble a few years ago Dug was swimming over 450 km each year. He now makes up for this by power walking almost each day. After working on scale insects each day, Dug gets down to what is his favourite hobby, gardening. He thinks nothing of growing over 1000 plants from seed in his greenhouse and cultivates them avidly throughout the year. Perhaps the only time we see him angry is when deer invade his garden. One of the most peaceful scenes in the evenings after all the work is done, is to see Dug sitting in his garden sipping a glass of champagne, his favourite tipple.

Once each year Dug travels to New Hampshire to spend a week teaching youngsters about cooking and eating insects, hiking, insect collecting and many other outdoor activities. In former times he was accompanied always by Judy.

Anyone who has stayed at Dug's home will have sampled his excellent cooking. He will spend some time creating intricate meals and it always gives him pleasure entertaining his many friends. Dug of course relishes artichokes at almost every meal. Another of Dug's passions is fishing and we have been waiting for some years for his book on fishing to appear. Dug will travel almost to the other side of his country to fish. It is an interesting sight watching Dug prepare his hooks or "flies" in fisherman's language, to lure the fish. Dug, however, never eats fish.

Dug is devoted to his two daughters and two grandchildren and spends time with them as much as possible even though they live at opposite corners of the U.S.A.

We wish Dug well in his retirement but hope that we can still call on him occasionally for help and encouragement.

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