In memoriam:

Brenda Margery Healy (née Foulds) (1932-2006)

On March 3, 2006, we lost a singularly important colleague, mentor and friend to students of aquatic oligochaete biology with the death of Dr. Brenda M. Healy. Brenda had battled with bone cancer for some years, for which the treatments were a very great drain on her energies. Nonetheless, hers was a presence that could not be denied at any time, with her most recent graduate student having just completed his PhD requirements in December, 2005, and with a number of manuscripts still in press or in preparation with colleagues. Her presence is also one that will be difficult to accept as missing from among our small global oligochaete “family”, as she has been part of the aquatic oligochaete biology symposium group from its early days. Brenda is survived by her brother, John Foulds and his wife, in England, two children Kevin and Siobhán, and four grandchildren in Ireland. She is greatly missed by her family, by the aquatic oligochaete biology community, and by aquatic environmentalists of Ireland.

Brenda attended every triennial International Symposium on Aquatic Oligochaete Biology (ISAOB) (later renamed the International Symposium on Aquatic Oligochaeta – ISAO) since the second convened in Pallanza, Italy, in 1982, and where I first met her in person. She did not always manage the most direct route to the meetings, as Stuart Gelder well remembers from the Presque Isle, Maine, USA symposium in 1997. Brenda was a chairperson for a symposium session, but was a little late booking her flights and had to rely on a cancellation to get a seat from New York to Boston as all direct flights from Dublin to Boston were fully booked. Discovering that train travel to Presque Isle was not possible from New York other than as freight, she then hired a car and drove the 400 miles from Boston to Presque Isle, arriving just in time for the commencement of her session, tired but unperturbed. Her return home was a bit easier, although there were many details to sort out. A full account of any adventures on the return home was not received, only, “Arrived home safely, thanks for a wonderful time”. When the symposium
convened in the Netherlands in 2003, she eventually arrived at the meeting venue after a circuitous, midnight bus ride from the train station at Wageningen. It suffices to say that Brenda never seemed to be distracted from her usual pace by such adventures, always arriving and participating in a way that benefited all the other attendees.

Born Brenda Margery Foulds, in London, England, September 25, 1932, she always indicated to me that her childhood had been a happy one. She recalled spending some long evening hours entertaining herself, perhaps wondering at the form of a spider web or the activities of some bird outside her window, after being sent to bed at 7 pm, which was the time for good children to retire from adult company. From her early years she had a keen interest in nature, and, it seems, an equal interest in seeing the world. Brenda went to southern France to take her undergraduate degree in science (L. ès Sc.) at Montpellier University, France, graduating in 1954. Shortly thereafter, she was off to be married in Rome, Italy, in 1955 to (Sylvester) Paul Healy.

Academic Career

*University College, Dublin (UCD)*

- 1957-1959, Teaching Assistant, Department of Botany
- 1958-1963, Teaching Assistant, Department of Zoology
- 1964-1989, Lecturer, Department of Zoology
- 1990-1993, Statutory Lecturer, Department of Zoology
- 1993-2006, Research Associate, Department of Zoology

Brenda began her academic career at UCD, one of the five constituent universities of the National University of Ireland, in 1957, where she undertook various studies. She eventually entered a PhD program in Zoology and received her PhD from the National University of Ireland in 1976 for her studies on the enchytraeids of Ireland (see Publications List). She remained at UCD for the whole of her long and productive academic career. Although she retired in 1993, Brenda maintained an emeritus appointment until her death, continuing her research and supervising graduate students. Her last graduate student, Dr. Geoff Oliver (Cork, Ireland) graduated in December 2005.

Brenda was a respected and well-loved colleague at UCD, renowned for her dedication to teaching both graduates and undergraduates. Brenda taught a great variety of undergraduate courses at introductory and advanced levels, and also took on the training of UCD nursing students in the basics of biology. Unlike many of her colleagues who were more conscious of their own “academic career paths”, she was a very active teacher throughout her career and subsequent to her retirement. She taught courses in:

- Marine Biology, introductory and advanced levels
- Terrestrial Ecology, advanced
- Invertebrate Systematics, intermediate
- Systematics and Biology of Birds and Mammals, advanced
- Animal Behaviour, advanced
- Evolution, Biodiversity and Biogeography, introductory to advanced
- General Biology, for Nurse Tutors

Brenda mentored graduate researchers in a great diversity of ecological and biological studies, including:

- Mining wastes and arthropods
- Ecology of the brackish water cockle, *Cerastoderma glaucum*
- Ecology of juvenile flatfish
- Ecology and behaviour of Brent geese, *Branta bernicla*
- Reproductive biology of *Chthamalus*
- Biology and reproduction of Gurnard species (fam. Triglidae)
- Population biology and reproduction of *Buccinum undatum*
- Population biology and reproduction of the velvet swimming crab, *Necora puber*
- Latitudinal gradients in life history traits of *Sphaeroma hookeri*
- Population biology and reproduction of the brown shrimp, *Crangon crangon*
- Invertebrates of brackish lagoons of Ireland
- Wildfowl and waders in the wetlands of Ireland and Spain
• Venom of the weever fish (fam. Trachinidae)

The unifying theme of these studies was the ecology and biology of aquatic systems, most often of coastal regions and many were related to either anthropogenically impacted habitats or impacted species.

Personal Research

Brenda began her science career as a botanist with a strong interest in aquatic systems, which soon led her to investigate the invertebrate fauna of salt marshes and bogs. From her earliest research pursuits, Brenda had a double interest and eventually a double expertise – the general ecology and taxonomic diversity of bogs, salt marshes, marine littoral and brackish water habitats, and the ecology and taxonomy of Enchytraeidae. Brenda’s species-level approach to ecology and a particular curiosity about ecotones linked these potentially distant research interests. Her PhD thesis (see Publication List, Healy, 1976) was an extensive eco-taxonomical survey on Irish enchytraeids; the thesis demonstrated that each species exhibits an individual ecological behaviour with respect to certain basic environmental factors, notably soil pH, moisture, oxygen content, and salinity. These findings laid the ground for the ecological classification of enchytraeid communities and their use in soil quality assessments – now routinely carried out for government agencies in Germany and the Netherlands, and, likely, soon in more countries of the European Union (EU). Brenda’s focus on ecotones along moisture, salinity or depth gradients was an academically “independent” pursuit in the 1980’s, when ecological studies had a proclivity for homogeneous sites that allowed large number of replicate samples, lots of summary statistics, and required little knowledge or specific understanding of the individual community members (Schmelz, in press). A few of her outstanding contributions are:

• Baseline surveys of the marine intertidal
  – Carnsore Point, Co Wexford
  – Aughinish Island, Shannon Estuary

• Impact assessments
  – Saltmarsh of Kilcoole, Co. Wicklow
  – Malahide Estuary, Co. Dublin
  – Lough Beg

• Habitat status assessments
  – Irish lagoons
  – Lady’s Island Lake, Co. Wexford

Environmentalist for Ireland

Brenda has been considered one of Eire’s most experienced and knowledgeable aquatic ecologists, and contributed to this field through her own studies as well as through her graduate students. Her fundamental studies of the ecology of aquatic habitats in Ireland included:

• Salt marsh, North Bull Island, Co. Dublin

• Blanket bog, Glenamoy, Carnsore Point, Co. Wexford

• Intertidal zone, Carnsore Point, Co. Wexford

• Brackish waters, Glenamoy, Carnsore Point, Co. Wexford

• Brackish lagoons, throughout the country

• Sand dunes, various locations

• Anchialine pools, western Ireland

And, she investigated the details of many faunal groups – isopods, geese, ostracods, swimming crabs, and enchytraeids.

Brenda’s studies exhibited her deep engagement as a well-rounded naturalist, abilities for keen observation and for discerning the most important habitat factors. A study on the long-term changes in a brackish lagoon comprised 16 years of observation and data, presented in a series of publications (see Publications List). A survey of Irish coastal lagoons from 1996-1998, supported by Irish authorities in order to comply with the Habitats Directive of the EU, directed by Brenda, led to a refined typology of lagoons. The resulting Irish lagoon inventory is the most detailed of all EU countries. Although awarded some regard in Ireland, Brenda’s environmental surveys are not widely known internationally, but should be (Schmelz, in press). A few of her outstanding contributions are:

• Baseline surveys of the marine intertidal
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• Impact assessments
  – Saltmarsh of Kilcoole, Co. Wicklow
  – Malahide Estuary, Co. Dublin
  – Lough Beg

• Habitat status assessments
  – Irish lagoons
  – Lady’s Island Lake, Co. Wexford

Studies on Enchytraeidae

Brenda’s PhD thesis was faunistically comprehensive; the enchytraeid fauna of Ireland remains among the best-known in the world. Like her ecological studies, enchytraeid taxonomy was a marginal field in the early 1980’s, perhaps because it was deemed a more difficult family than most other aquatic oligochaetes. Thus, she was again breaking new ground and forging
ahead in a somewhat solitary pursuit.

Since the 1980’s, Brenda has been a mentor to many of the current enchytraeid taxonomists:
• Emilia Rota
  – PhD, thesis, Enchytraeidae in the Mediterranean region
  • Kathryn A. Coates
  • Steven V. Fend
  • Jan M. Locke
  • Ruediger M. Schmelz
  • Tarmo Timm

Although Brenda spent all of her long academic career at University College, Dublin, she loved to travel. As noted previously, she regularly attended the ISAOB/ISAO, and also attended and contributed to the meetings of the European Enchytraeid group. From the early 1980’s, she visited me at residences from the west to the east coasts of Canada, and more recently to Bermuda. We also went together on several field trips, some near home in central and southern Ontario and Bermuda, some slightly farther from home in eastern New Brunswick and Nova Scotia, and a few at great distances – to Darwin (Northern Territories) Australia. She also took me on a few ad hoc ventures, including a brief trip through southern Louisiana, Georgia and northwestern Florida, following the 1988 ISAOB in Louisiana. Wherever and whenever she was in the field, she combined working very hard, under various and all circumstances, with thoroughly enjoying herself and entertaining her companion(s).

Brenda especially liked working in warm climates. She recognized the great diversity of potential habitats for enchytraeids in these environments, and was the first to describe species from a number of unique microhabitats of temperate, subtropical and subtropical shorelines and coastal regions.

In addition to her extensive faunistic studies of enchytraeids in terrestrial, freshwater, and marine coastal habitats of Ireland, she undertook smaller, on a temporal scale, studies in all of:
• Sweden, terrestrial and freshwater habitats
• Florida, USA, terrestrial, intertidal and coastal habitats
• Georgia, USA, salt marshes
• New Brunswick, Canada, freshwater and coastal habitats
• Bermuda, intertidal and coastal habitats
• Costa Rica, Guanacaste Conservation Area, terrestrial and freshwater habitats
• North Africa, terrestrial habitats
• Northern Territories, Australia, intertidal and coastal habitats, including mangroves
• Southern France

Brenda contributed to several larger taxonomic projects, including the “Swedish Worm Project” (SWORM; see Publication List, Erséus et al., 1999, Erséus et al., 2005, Rota & Healy, 1999) and the comprehensive European Registry of Marine Species (see Publication List, Erséus & Healy, 2001)

Enchytraeid ecology and distribution

Brenda was the first to look for and find enchytraeids in a number of unique and specialized habitats – in Spartina stems, in intertidal rock crevices, in supralittoral dunes, in intertidal algal mats, on mangrove aerial roots and on mangrove pneumatophores. She also clearly recognized the importance of enchytraeid communities in transitional habitats, e.g., along the marine shore, and encouraged careful examination of under-regarded, and extreme subhabitats, such as rotting beach wrack and intertidal algal mats on rocky tropical shores.

Legacy

New enchytraeid species described by B. Healy

Buchholzia fallax arenaria Healy, 1979
Cernosvitoviella goodhui Healy, 1975
Cernosvitoviella microtheca Rota & Healy, 1999
Cernosvitoviella palustris Healy, 1979
Cernosvitoviella sphaerotheca Healy, 1975
Cognettia floridae Healy, 1996
Cognettia hibernica Healy, 1975
Enchytraeus minutus bisetosus Rota & Healy 1994
Fridericia christeri Rota & Healy, 1999
Fridericia discifera Healy, 1975
Fridericia sohlenii Rota, Healy & Erséus, 1998
Fridericia sylvatica Healy, 1979

A genus of Turkish earthworms, *Healyella*, was also named in her honor by Omodeo and Rota (1989).

The dedication was “to a distinguished student of Oligochaeta”. The Type species of the genus is *Healyella syriaca* (Rosa, 1893), and it includes about 10 species.

It was Brenda’s wishes that her specimen collection and specimen records be deposited at the National Museum of Ireland, Dublin. Dr. Ruediger M.
Schmelz is developing an inventory of this collection, which includes valuable material from many locations, and which can be a source of material to many researchers. Over the past few years, Brenda, and I collected and prepared nearly final descriptions for a number of species from Florida and Bermuda. These will be published in the next few years; and there are other manuscripts in preparation or submitted for publication with colleagues from Ireland (see Publications List).

_Curiosity in the field is necessary for good taxonomy._
_Keen observations are the link between taxonomy and ecology._

These wonderful aphorisms on Brenda’s particularly revealing approach to field work were made by Ruediger Schmelz. It is certain that these attitudes led to the discovery of many new species, collected from many unexplored or disregarded habitats. Although it is difficult to contemplate moving ahead on taxonomic studies of enchytraeids without Brenda’s opinion and guidance, it is to her honor to proceed with the work that she held to be of such great importance to our understanding and full appreciation of nature.

**List of Publications by Brenda M. Healy**


Hatch, P. & B. Healy, 1998. Aquatic vegetation of
Acknowledgements

G. Oliver provided links to important information. The photograph of Brenda was provided by Mr. Kevin Healy. M. J. Wetzel and R. M. Schmelz provided many useful suggestions, encouragement and information. An earlier version of this memoriam, coauthored by K. A. Coates, R. M. Schmelz and M. J. Wetzel, was presented by Wetzel at the 10th ISAO that convened at the Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan, China, in October 2006. Figure of *Mesenchytraeus rhithralis* published with permission of Taylor and Francis UK Journals and Mr. S. Fend.

Literature Cited


Schmelz, R. M. In memoriam Brenda Healy. Folia Facultatis scientiarum naturalium Universitatis Masarykianae Brunensis, Biologia. (in press).

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