

Phycological Trailblazer

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Sophie C. Ducker

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With the death of Sophie Ducker on 20 May, 2004, in Melbourne, phycology lost a major contemporary figure, a person who contributed much to our understanding of marine algae, sea-grasses and their pollination, horticulture, and the history of botany. On April 9, 1909, Sophie Charlotte von

Klemperer was born in Berlin into a prominent Jewish family, in which her banker father had sufficient leisure time and resources to spend much of his non-banking hours in accumulating very old books. That love for books was passed down to Sophie. She was raised in Dresden, but with her father off to serve in the

Austrian Army during World War I, normal life was non-existent. She was sent off to England to complete her education (at the Cheltenham Ladies College), upon which she returned to Germany. She had an abiding fascination with plant life and thus started advanced studies in botany, first with the freshwater phycologist R. H. Chodat in Geneva. This was pivotal training that opened up to her the world of algae. She also studied in Stuttgart. But this education was interrupted in 1931, when she married Dr. Johann Friedrich Ducker, an executive officer with the Chamber of Commerce in Hamburg.

With the emergence of the Nazi regime in Germany, the decade of the 1930s was an

extremely difficult and dangerous time, and in 1938, Sophie, her husband, and young son Klaus were forced to flee Germany. Sophie, expecting a second child, was initially on her own. Her father had entrusted her with a small but very valuable collection of stamps to use as possible collateral in her escape, but, as she later told me, all the stamps were taken from her at a border crossing.

Another incident, a traumatic event, that she also related to me of her escape was that when her labor pains began, she was put into a room all by herself, where she gave birth to a daughter. She received no medical assistance, and the baby died soon after birth. Separated from her husband and her son, Sophie traveled

to "Persia" [Iran], where she was finally reunited with her family. She happened to be visiting her parents in Rhodesia, where they had escaped to, when the War fully broke out. She was forced to remain in Africa for some time employed as a governess on a remote farm looking after 5 children. In 1940 she was able to book



Sophie Ducker on a *Sphagnum* bog near Brighton, Michigan, August, 1982.

passage on an Italian ship headed from Mozambique to Persia, where her husband and son were located. But while that journey was underway, in June of 1940, Italy entered the war, and the boat got chased by a British warship. The ship that Sophie was on took refuge in southeastern Persia, and from that remote point Sophie made a risky journey, partly on camelback through bandit country, to reach the relative safety of Tehran. In 1941, with the three Duckers still in Persia, the Soviet Army invaded the northern part of the country, and the British forces invaded the south. Sophie's husband was placed under arrest by the Soviet Army, but



Fig. 1. Sophie Ducker (second from left), with Murray Parsons, Irené Novaczek, and Francis Magne, on foray to Queenscliff, Victoria, Australia, August, 1988

according to son Klaus' story (Ducker, 2004), his Mother was able to cajole the British authorities [she had a knack for that] in Tehran into arranging her husband's release. Once set free from the Russians, Dr. Ducker, his wife Sophie and young Klaus soon left on a boat, with very few possessions, headed for an unknown destination. They arrived in Australia just before Japan entered the War. It was in Australia, more specifically Melbourne, where they settled, established roots, and were later to become Australian citizens, although husband Fritz's qualifications and doctorate were never recognized in that country and he never achieved the status there that he would have had he elected to remain in Germany and abandon his "Jewish" wife as he was ordered to do by the Nazis.

It was only after Sophie's son was raised that she made the decision to resume the pursuit of a botanical career, even though she had no graduate degree. Her first employment was in the Botany School at 'Melbourne Uni', where she worked in the fungal lab of Dr. Ethel McLennan, who proved to be an encouraging mentor (Ducker, 1988b 1995a). The focus of McLennan's lab was to establish and maintain cultures of fungi, especially *Penicillium*, as a resource for obtaining antibiotics in Australia. At

first, Sophie did menial tasks such as washing glassware and preparing media, but gradually she was given more and more responsibilities, eventually becoming a co-author to several publications with Dr. McLennan. Sophie's innate abilities and her enthusiasm for botany became obvious to everyone, and she was now even entrusted with academic responsibilities such as mentoring her own PhD students. She also transferred her attention more to the marine algae as well as to sea-grasses despite the constant discouragement and carping of her Department Head that there was no prestige, future or road to

advancement in the study of such inconsequential organisms. Her interests were very broad: systematics, ecology, the relationship of host and epiphyte or parasite, pollination ecology in sea-grasses, and eventually history. She was allowed to advise several graduate students over the years. These included Ian Price, Robert King, Peter Saenger, Margaret Clayton, Vicki Brown, Serena Canterford, and Cameron McKonchie. She had fruitful collaborations on such diverse topics as pollination in sea-grasses and distinctive red algal pigments with colleagues in the School of Botany such as Bruce Knox, Kingsley Rowan, and John Pettit. Like many of the talented Australian woman botanists of her era, such as Isabelle Cookson, Ethel McLennan, Margaret Blackwood, and Gretna Weste, Sophie was a victim of a repressive "glass ceiling" at Melbourne University for none of these talented scientists were ever elevated to full professorships and indeed were granted only the rank of reader (i.e., Associate Professor) in their last year before retirement. Her interest in green algae resulted in several papers, including not just a monograph of *Chlorodesmis* (Ducker, 1967) but also the first publication on the use of numerical taxonomy in an algal genus (Ducker et al., 1965).

She had several solo-authored and co-authored papers on various green algal genera and also on species of mostly articulated Corallinaceae, including a monograph of the Australian endemic genus *Metagoniolithon* (Ducker, 1979b). Her fluency in several languages gave her a facility to carry out her research in the history of phycology, with an emphasis on Australia. She dealt with contributions by the French (1979a), the Germans (1981, b, c), and the Austrians (1990a), as well as producing more general historical treatments (1981a, 1990b). But it was William Harvey, of Trinity College, Dublin, Ireland, that she was especially drawn to (1972, 1977, 1992, 2002). A visit to Harvard University resulted in her discovering a treasure-trove of letters written by Harvey to Asa Gray and his wife Emma Gray (and to others), allowing Sophie to edit a handsome volume of these correspondences (Ducker, 1988a). Her chapter on the history of Australia phycology (done with Roberta Cowan) in the recent book "Algae of Australia: Introduction" is a very rich source of information and a fitting final contribution from her (Cowan & Ducker, 2007).

I first met Sophie Ducker as a grad student in the mid-1960s, when she spent some time in the Dept of Botany and Herbarium of the University of California, Berkeley, consulting with Drs G. F. Papenfuss and P. C. Silva. Some time later (in 1981) I spent a sabbatical at Melbourne Uni interacting much with her and with old friends and colleagues such as Gerry Kraft, Rick Wetherbee, Carrick Chambers, and Tim Entwisle. I was housed in a rather spartan "faculty flat" at one of the "colleges" (student resident halls), and Sophie often checked to make sure that I was getting along ok, loaning me books to read and her spare "telly". She also invited me several times to have dinner with her at her home on Percy Street in the suburb of Balwyn. I recall how she would go out into her backyard and bring in ripe vegetables and fruits like pomegranates and citrus to add to the meal. Her home was also a rich library full of choice items that she was later to bequeath to the University of Melbourne special-collections Library. It was during that sabbatical stay that Sophie kindly turned over to

me a small vial of a wet-preserved delesseriacean alga that she had "secreted" out of Madagascar in 1974. It was just a fragment, but in studying that small scrap I was able to determine that it was the totally obscure species *Delesseria ferlusii* Hariot, the original 18th Century collection having been made at Fort Dauphin, Madagascar. But I also later realized that it had to be an undescribed genus that I was pleased to name *Duckerella*. Her Madagascar trip also resulted in the description of a totally new genus and species of gigartinalean algae of the obscure family Acrotylaceae which Gerry Kraft named *Ranavalona* (after both the collection locality, Cape Ranavalona, and a famous early queen of the southern region) *duckerae* (Kraft, 1977). Sophie's Madagascar trip was not without considerable personal dangers. Madagascar was then governed by a series of unstable left-wing dictatorships. Life and safety for the very few intrepid visiting westerners could be very uncertain. Awaiting departure with a large collection of marine algae, she was told that all would have to be left behind and that the penalties for attempting to smuggle out even the smallest amount of natural resources would be severe. Retiring to the ladies' room, Sophie picked out the cream of her collections (including the "*Delesseria*" and *Ranavalona*), secreted the specimens in her brazier, and returned intimidation for intimidation as she sailed majestically through customs.

A year later, in 1982, on her way to attend the First International Phycological Congress in St. John's, Newfoundland, Canada, Sophie came through Ann Arbor and stayed with me. I can't recall where the idea came from, but I decided to drive her up to a very picturesque *Sphagnum* bog just west of Brighton, Michigan, a perfect place to see sundews and pitcher plants, as well as to make *Sphagnum* "squeezeings" for acid-loving desmids. Sophie quickly ventured out on the bog and although by then in her early 70s, she totally delighted in jumping up and down, as if she were on a mattress. It was a genuine quaking bog after all, and she remarked that it was her first time on such a *Sphagnum* bog since she had left Germany almost 45 years



Fig. 1. *Duckerella ferlusii* (Hariot) M.J. Wynne. Specimen collected by Sophie Ducker in Madagascar.

before. At that First Congress Sophie had been invited to give a special lecture covering the rich history of collecting done at Port Phillip Heads, south of Melbourne, a classic site that was visited by such luminaries as William Harvey, Ferdinand von Mueller, Rev. John Bracebridge Wilson, A. H. S. Lucas, Josephine Tilden, Lily Newton, Ferguson Wood, Mary Pocock, and G. F. Papenfuss. That lecture, which was both informative and entertaining, was published the next year in *Phycologia* (Ducker, 1983), and it is still a “good read” as Sophie’s keen interest in the human side of science comes abundantly through. At the time of the Third International Phycological Congress, held in Melbourne, Australia, Sophie was in the thick of the collectors on an organized foray to Queenscliff, Port Phillip Heads, giving out her ideas of the names of species that folks brought to her to identify (Fig. 1).

Sophie Ducker was an avid collector and reader of books, traits inherited from her bibliophile father. The family home in Dresden had its own library, in which Sophie’s father had accumulated the largest private collection of “*incunabula*” in the world [books printed pre-1500]. These books were later to disappear when the Nazis took over the city and burned down the home. It was only after 1989, when

the Berlin Wall separating East from West Berlin came down, that some of her father’s precious library surfaced. In 1991 Sophie attended an auction of those *incunabula* at one of the famous institutions (Sotheby’s or Christies’) in London.

On another occasion, it came to my attention that a copy of Samuel G. Gmelin’s (1768) *Historia Fucorum* was available at an antiquarian bookshop in Ann Arbor. It was an amazingly clean copy, selling for \$350. I owned a very dog-eared copy of the book. But I contacted Sophie to find out if she was at all interested. She did not have it in her library, and she said on the phone “Buy it for me!” So I quickly returned to the shop and bought it for Sophie to add to her collection.

As I said at the time that I described the new genus *Duckerella* (Fig. 2) (Wynne, 1982), it was named to honor “the undaunted spirit” of Sophie Ducker. I came to realize that that phrase aptly summarized her entire life. She could be irascible and demanding at times, but underneath that exterior was a most generous soul, one motivated by her high standards and also never deterred by the many hardships and at times extreme challenges that came her way. She’ll always be remembered as a unique “trailblazer” and a role model, someone who

never gave up. At this time, just a year shy of the centennial of her birth, we have happy memories of Sophie C. Ducker and are grateful for her uncounted contributions to phycology and the history of science.

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