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Obituary: Professor Serge Daan (11 June 1940 – 9 February 2018)

1 | GRAND AND COMPELLING

Professor Serge Daan, an honorary member of our society, passed away on Friday, 9 February 2018. We are deeply saddened by his death. With him, we lost a friend and an eminent scientist who made major conceptual and empirical contributions to chronobiology and behavioural ecology through his astute theoretical and experimental work, integrating the study of mechanisms and adaptive function of behaviour (Figure 1). Many of us profited from his enthusiasm, sharp analytical mind and his great scientific skills in discussing questions of shared interest. Often these exchanges took place in the friendly atmosphere of his house “Villa Later” at Paterswolde where he and his wife Ruth Hohe-Daan welcomed many colleagues as guests.

Serge Daan studied biology at the University of Amsterdam where he received his Ph.D. in 1973 with a thesis on activity during hibernation in vespertilionid bats and garden dormice. In 1971, while still putting the last touches on his Ph.D. thesis, he became a post-doc at the Max Planck Institute for Behavioural Physiology in the department of Jürgen Aschoff. This led to an enduring friendship and intense exchange of ideas and collaboration, and they continued to publish together throughout their careers. This postdoc resulted in their first joint paper about how circadian rhythms change with season and latitude (Daan & Aschoff, 1975), reflecting a lifelong interest in the role of circadian clocks in seasonal timing and their significance in an ecological context (Hut, Paolucci, Dor, Kyriacou, & Daan, 2013). Just weeks before his death, Serge was deeply gratified to see his book on the life and work of Jürgen Aschoff published (Daan, 2017). Through Aschoff, he met Colin Pittendrigh, with whom he spent his second postdoc at Stanford University. His friendships and intensive collaboration with these two founders of the field of chronobiology had a profound influence on his further career. During his stay in Stanford, Serge wrote a series of papers together with Pittendrigh (A functional analysis of circadian pacemakers in nocturnal rodents. I–V) which appeared as one complete issue of the *Journal of Comparative Physiology* in 1976 and has become the “Bible of Chronobiology” for scores of students and scientists. In 1975, he joined Rudi Drent’s group at the University of Groningen where he became independent Professor of Ethology in 1996. While working with Drent, he initiated an important project on the energetics and life history of the kestrel which led to a number of influential studies, including the joint publication of the citation classic “The Prudent Parent” (Drent & Daan, 1980). His comprehensive work on

FIGURE 1 Serge Daan in Bubonizi, Russia (2006, courtesy of Berte Daan). [Colour figure can be viewed at wileyonlinelibrary.com]

the timing and energetics of reproduction led to an invitation to deliver the “Tinbergen Lecture” at the meeting of the Association for the Study of Animal Behaviour in London in 1996. In 2003, he was promoted to the prestigious Niko Tinbergen chair in Behavioural Biology which he held until his retirement in 2011. As president of the Dutch Society for Behavioural Biology (1996–2001), he kept in close contact with the *Ethologische Gesellschaft* e.V. This was acknowledged in 2008 when he was made an honorary member of our society at the ECBB meeting in Dijon.

Chronobiology was at the heart of Serge Daan’s research, continuing the legacy of Aschoff and Pittendrigh, as he said, with “*the dwarf’s luck of standing on the shoulders of both of them, first as a*

postdoc, then as a personal friend" (Daan 1998). Supported by an enthusiastic research group and an international network of collaborators, he developed and tested core models of the circadian and annual regulation of behaviour. His far-reaching interests encompassed key areas in behavioural ecology, in particular life-history theory, parental investment, sex allocation and behavioural energetics, resulting in a highly rewarding and productive life, represented by roughly 250 publications and over 15000 citations. He challenged and inspired students and colleagues during weekly "lunch meetings," at scientific workshops and through his excellent lectures. He mentored more than 40 Ph.D. students, many of whom continued to pursue academic careers.

Serge was a member of the board of the Netherlands Organisation for Scientific Research (1997–2002), chairman of the NWO program Evolution and Behaviour (2002–2009) and president of the Dutch Society for Behavioural Biology (1996–2001). From 2001 to 2004, he was vice dean for research at the Faculty of Mathematics and Natural Sciences of the University of Groningen, and, together with Dean Douwe Wiersma, he initiated important changes to support young academics, such as the tenure track system and the Rosalind Franklin fellowships for women. As dean of the Faculty from 2007 to 2009, he was deeply involved in the planning and organisation of the new Life Sciences building (Linnaeusborg) and its facilities on the Zernike campus.

Serge was awarded many honours, among them having a subspecies of agamid lizard, *Stellagama stellio daani*, named after him. In 1992, he received the Alexander von Humboldt Research Prize; in 2000, he became an elected fellow of the Royal Society of Canada; in 2002, he was awarded "Aschoff's rule"; in 2005, he was made a Knight of the Order of the Netherlands Lion; in 2006, he was awarded the *International Prize for Biology*; in 2008, the *Eminent Scientist Award* from the Japan Society for the Promotion of Science; and in 2016, the *Aschoff and Honma Honorary Prize*.

We will greatly miss Serge's sharp mind, sage advice and cordial friendship.

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