

In memory of Tomáš Soldán (9 November 1951–13 August 2018)

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A noted entomologist and unsurpassed expert in the area of water insects research Tomáš Soldán has gone on 13 August, 2018 after a short-period disease at the age of 67 years in České Budějovice (Czech Republic). Both the Czech and international entomological community have lost one of their most distinctive and unique members.

Tomáš Soldán was born in Prague, and from his childhood he took a great interest in zoology, mainly entomology. Love for nature in Soldán's family also passed to his younger brother Zdeněk Soldán, who became a bryologist.



FIGURE 1. Young Tom in the late 1970s during his PhD studies.

While living in Prague and its surroundings, the most part of the year Tomáš collected insects. These first excursions in the city parks and public gardens, collection of butterflies and beetles were long and sometimes in the prejudices of other studies, such as playing the trumpet in a music school. Later on, Tomáš mastered this instrument and remained love for wind instrument music for his life, especially for national Czech brass music *dechové hudby České republiky [dechovka]*.

Tomáš studied at well-known Prague gymnasium Botičská, and upon finishing the gymnasium he entered in 1970 at the Faculty of Science, Charles University in Prague. His early interest for insects was crucial in his choice for the future specialization in the field of systematic zoology and entomology. By that time at the faculty worked the remarkable entomologists Karel Hůrka, Milan Chvála and Pavel Štys, whose teaching combined both deep knowledge in the subject, interesting lectures and open, creative atmosphere of cooperation with the students. Later on Tomáš remained close professional and friendly relations with professors and senior colleagues for many decades. Excellent lectures of Pavel Štys on insects morphology influenced on his future professional appeals. So, scientific shaping of Tomáš was performed in the atmosphere of the institution where previously worked the key specialists in the field of systematic and ecology of insects, such as Julius Miloš Komárek and Jaromír Šámal, and a remarkable entomologist and founder of the Czech Entomological Society [*Česká společnost entomologická*] František Klapálek.



FIGURE 2. Tom with friends (John Flannagan, Tomáš Soldán, Janice Peters, Patricia Flannagan, Javier and Marichu Alba-Tercedor; International Joint Meeting on Ephemeroptera and Plecoptera, June 2012, Wakayama, Japan).

After completing his university studies (M.Sc. thesis on comparative anatomy of aquatic insects), and compulsory military service, in summer of 1975 year Tomáš began his work at the Department of insects morphology at the Institute of Entomology CAS, established in 1962 in Prague (now Institute Entomology, Biology Centre CAS). Tomáš started his work over theses under supervision of another well-known researcher of mayflies Vladimír Landa. At this institute he worked 43 years of his professional life from a Postgraduate up to a Director.

In the period of his work over the theses, Tomáš interested in various aspects of morphology, taxonomy, ecology and regional faunistics of mayflies. His first works about mayflies were published in 1977. Meanwhile he continued researches of insects anatomy previously started at Charles University. His PhD thesis defence was in 1979, it was devoted to the effects of some pathogens and parasitoids on insect reproductive system.



FIGURE 3. Tom in most favorite activity (Czech Republic, late 2000s).

Another important event in Tomáš' life took place in 1979, when his family and him moved from Prague to České Budějovice (South Bohemia), where the Institute of Entomology was transferred along with gradual transfer of other institutes of CAS. Tomáš participated in establishing of the new laboratories, and in 1985, when the Institute was transferred to a modern building at the address of Branišovská 31, Tomáš became the Head of the Department of Morphology.

During that period there were published a lot of articles, which described new taxa of mayflies and revised some species (mainly representatives of families Baetidae and Heptageniidae), as well as contributions on different groups of insects. Tomáš successfully developed international cooperation through publishing taxonomic articles, e.g. with Dietrich Braasch, Ingrid Müller-Liebenau and later with Alain Thomas, Javier Alba-Tercedor, Nilgün Kazancı and Ryszard Sowa, as well as with many colleagues from the Institute of Entomology and other institutions of the former Czechoslovakian Academy of Sciences.

His scientific interests were significantly beyond the frame of the research of Ephemeroptera. He studied the microstructure of insect gonads and the effect of biologically active components and parasites on their reproductive system. With his participation there was developed a method of sterilization of male tsetse fly, which was used in some African countries in 80–90s. Tomáš worked in cooperation with other colleagues when studying ontogenesis of water bugs gonads as well as devoted a lot of time and attention to research of taxocene of water insects.

His footprint was also tracked in the field of hydrobiology, as he conducted long-term research of the biodiversity of streams in the Czech Republic and worked in several projects dealing with the assessment of the ecological status of streams.

Due to Tomáš Soldán's efforts in 70–90s they continued research of long-term changes in the structure of taxocenes of macrozoobenthos (i.e., Ephemeroptera, Plecoptera, Trichoptera) in the territory of former Czechoslovakia, later the Czech Republic. Thereby they accumulated an extended unique and methodologically homogeneous database. These data become a basis for analysis of changes in the distribution of species and the structure of communities due to the effect of anthropogenic pressures starting

from the second half of the XXth century till nowadays. After 2000, in close cooperation with colleagues from the Faculty of Science of the Masaryk University in Brno Světlana Zahrádková, Jindřiška Bojková and Jan Helešic there were repeatedly researched historical monitoring localities in Czech Republic.

In the year 1989, Tomáš defended his habilitation work on ecology of mayflies (Ephemeroptera) and their use in bioindication of environmental changes.

In the years 1990–1992, Tomáš was a director of the Institute of Entomology, and since 1991, he also was one of the first lecturers at the newly founded Faculty of Science of the University of South Bohemia. For a short period, in the years 1999–2002, he occupied the position of the Vice-Dean of the Faculty of Biology (University of South Bohemia), and starting from the year 2000 he became the Professor of Zoology in this University. However, his pedagogical career has already started in 1979, when he was teaching at the Faculty of Agronomy and Pedagogical Faculty at the Prague Agricultural University in České Budějovice.



FIGURE 4. Tom passionate traveller (Cape Verde, May 2013).

Lectures opened for Tomáš an opportunity of intensive communication with students during the lecture courses and numerous field excursions and practices, for example, to the Bohemian Forest. In the end of the 90s, to the Department of Ecology of Wetlands (IE BC CAS), headed by Tomáš since 1998, PhD students graduates of the University of South Bohemia had come and continued their work at research positions in the University of South Bohemia and the Academy of Sciences. Many of the students, the biologists, remember those excursions and that benevolent, informal yet extremely professional spirit governed during them. Tomáš always positioned himself to the students as an elder comrade and a good tutor, albeit he never tolerated irresponsibility in the studies. Both students and scientists, his colleagues, noticed his incredible encyclopaedic fund of knowledge in various aspects of zoology and entomology. This deep knowledge as well as thorough orientation in the scientific literature combined with his photographic memory led him to work quick and efficiently, avoiding unnecessary inquiries to the references.

From the very beginning of his scientific career, Tomáš had travelled a lot. He visited more than eighty countries, dedicated his special devotion to the Balkans, the Caucasus and East Asia. In the last two decades, he actively studied the insular fauna of mayflies during expeditions, and using each spare minute in his family trips. That way he visited the Canary Islands, Madeira, the Mediterranean (Sardinia, Cyprus, Malta and Rhodes), and very recently Cabo Verde.

Undeniably, mayflies were a priority in his studies, and he achieved remarkable results in this field. Tomáš was one of the brilliant representatives in the group of mayfly researchers, relatively minor on a global scale. He collaborated with many Czech and foreign colleagues, maintaining friendly relationships with them, often beyond the frames of formal professional contacts. Very close, long standing and friendly relationships bound Tomas and his family with Michela Sartori, the spouses William and Janice Peters, Ernst Bauernfeind, Javier Alba-Tercedor, and Elda Gaino. In Czech he actively collaborated with colleagues from Prague and Brno, as well as with his mayfly team in Ceske Budejovice, Pavel Sroka and Roman Godunko.

Owing to Tomas' activity and efforts at the Institute of Entomology one of the largest mayfly collections in the world was created, which numbers approximately a million of exemplars. From the numerous expeditions, Tomas brought enormous amount of taxonomically valuable material, which has become a basis for description of the new species and scientific publications. Tomáš wrote more than 300 scientific publications, but their list and description can hardly capture their author's personality. During his career, Tomáš described more than 70 mayfly species. In the same time, in his honour, as a act of homage and in recognition of his scientific achievements, nine species of aquatic insects were named. He has become a world-renowned and leading researcher of Ephemeroptera, whose work culminated in the opus magnum, *The Mayflies of Europe* (2012), written together with his friend Ernst Bauernfeind. For his contribution to the knowledge of mayflies, he was awarded with the Lifetime Achievement Award, awarded on the occasion of international conferences on mayflies and stoneflies. Also Tomáš was a member of the Permanent Committee of the International Conferences on Ephemeroptera since 1983. Tomáš thus entered the company of the greatest personalities in the history of his field.

Tomáš participated in many activities for environmental conservation. He was a member of the committee for awarding a symbolic anti-prize by the public organization The Children of Earth for the last 25 years. He was an active member of the Czech entomological society since 1978, and during 1998–2012 he was a member of the committee of this society and helped to develop the Czech entomological tradition.

Tomáš was always a splendid friendly person. It was a great pleasure to spend with him time in the laboratory studies or in the field. He had a broad erudition. He understood and spoke several languages. He was deeply and diversely fond of history, especially of the XXth century; he liked to read a lot. In his vast library, enumerating several thousand volumes there was plenty of belletrist literature, as well as books for history, architecture, geography, biology and of course entomology. He always held a book in the pocket of his jacket, typically a detective novel, a remarkable collection of which he possessed.

Spending lots of time in journeys, Tomáš become an excellent and a very responsible driver. He was good in telling stories about his road adventures, which he has experienced quite a lot in his life, and his "heroic stories" about trips on his family's car Trabant to the Balkans, always had a great success. He always amused people around him with his unique sense of humour, so we will really miss his jokes and bon mots.

Tomáš always got support from his family. His wife Zdeňka whom he met in school years, and his two daughters Irena and Miroslava, often accompanied Tomáš in his trips, whether it be field expeditions, conferences or personal meetings with his friends entomologists.

In conclusion, here are a few short stories about Tomáš Soldán written by his long-years friends and colleagues.

Javier Alba-Tercedor, Universidad de Granada, España

It was 1983, when I had the opportunity to attend my first international Ephemeroptera conference in Bechyně. There I met Tomáš. We were very young, and he was perfectly involved in his role as organizer, host of the event, and trusted man of Professor Landa, he was attentive to every detail so that everything went perfectly. At the end of the conference, I stayed for a short research stay in Professor Landa's laboratory, and that is where I began to be fascinated by his personality. With a kind character, a little shy, not bragging, he quickly dazzled me with his knowledge, not only of Ephemeroptera, but of many other aspects of biology. There I met his wife Zdeňka and we began our friendship. After a short time he stayed in our lab in Granada.

I was lucky enough to work with him, and to spend many hours talking. We prepared together a manuscript on the Mayflies of the Canary Islands, fruit of his tireless eagerness and illusion to collect. In fact he was the one who did the sampling and on foot.

In the summer of 1997 we were lucky enough to host the whole Soldan's family in our country house in the Sierra Nevada spurs close to Granada. Later, thanks to our common friendship with John and Patricia Flannagan and the hospitality of the Flannagan family, we spent a wonderful holiday in the early 2000s on Salt Spring Island, and travelled through British Columbia in Canada. And while John Flannagan and I simply enjoyed the scenery and the wonderful waterways, he never stopped sampling every time. Simply indefatigable!

I could continue remembering endless anecdotes, but the important thing is that behind that kind face, with a shy look, those of us who were lucky enough to know him, to share moments with him. He was not only the great scientist we all know for his great production, but a great man, in love with his family, full of kindness and sense of humour and that we always miss.

Ernst Bauernfeind, Naturhistorisches Museum Wien, Austria

Since we first met in the early 1990s I was connected with Tomáš Soldán by true friendship for many years. I own a great debt to his kind heart, his generosity, his far-flung knowledge and disinterested amity. As an outstanding scientist his interest in Mayflies was boundless and his experience, based on careful studies and travels throughout the world, was unrivalled among his friends and colleagues. His numerous publications adequately illustrate his versatile interests and his lifelong commitment to science. Public or private, it was always his strongest intention to do justice to everyone and to give equal attention to different or dissenting opinions—he would discuss but never condemn. I'll always remember him with sincere gratitude.

Elda Rosa Gaino, Università degli Studi di Perugia, Perugia, Italy

I first met Tomáš Soldán during the second Conference on Ephemeroptera held in Kraków in 1975, when I was starting my investigations on mayflies. Tomáš's studies on the reproduction of these insects prompted me to deepen my research activity in that field by using modern technologies.

A capable, intelligent and highly competent person, Tomáš often gave me precious advice on how to solve difficult taxonomic problems. I remember Tomáš with affection and I had the opportunity for friendly exchanges during the Joint Meeting on Ephemeroptera and Plecoptera, which took place in Italy in Perugia in 2001. On that occasion, Tomáš illustrated his research with his customary calmness. He raised important questions that stimulated the discussion and aroused particular interest among the young participants.

I vividly remember the fifth International Conference on Ephemeroptera and Plecoptera held in Marysville in Australia in 1987. A night field trip was organized to collect insects as they emerged from a stream, by attracting them with lamps. I remember Tomáš lying on the ground surrounded by lamps and completely covered by insects. With his usual calm, Tomáš collected them one by one with some difficulty because his eyes also attracted the insects, which tried to settle on them. We could not help laughing and took pictures to immortalize the event. The capturing session lasted several hours but, at the end, the tireless Tomáš returned happily to the hotel with his rich "booty".

All of us have lost a remarkable scientist, whose investigations have helped to expand our knowledge in various areas of entomology. We will all miss his friendliness, his competent collaboration and his affable manner.

Michel Sartori, Musée cantonal de zoologie Lausanne, Switzerland

In 2003, I invited him in Lausanne, with Arnold Staniczek, to work with Jean-Luc Gattolliat and me on the morphological matrix of mayfly families we wanted to establish within Heath Ogden's project on combined phylogeny of mayflies. We spent hours to choose the characters and then to code them; and this is at that moment I realized how huge was his knowledge about mayflies. When I was jumping from one paper to another in my library to check some characters, Tomáš was just whispering the answer! And of course he was always right! We were then able to achieve this enormous task within a few days thanks to him.

John and Patricia Flannagan, SaltSpring, Canada

Tomas was a true gentleman. He always saw the needs of others and with his shy smile and good humour, he was a pleasure to be with.

We got to know him better at the Bechyne meeting, and then became friends with his family too.

He was an accomplished scientist indeed, and also an extraordinarily enthusiastic collector. When Tomas and family came to visit us on SaltSpring Island, he took every opportunity to search for mayflies. And this was true at each one of our meetings. His love of nature was clear and enduring. We have many happy memories of times shared.

Our “mayfly family” has lost an important member.

Some facts about Tomáš Soldán life were borrowed from the following papers (Bojková 2018; Sroka & Bezděk 2018). A complete list of the Tomáš Soldán’ publication was published by Sroka & Bezděk (2018). Great appreciation to Jindřiška Bojková (Masaryk University) for providing us with the photos of Tomáš Soldán.

References

- Sroka, P. & Bezděk, A. (2018) Vzpomínka na Tomáše Soldána (9. listopadu 1951–13. srpna 2018) [In memory of Tomáš Soldán (9 November 1951–13 August 2018)]. *Klapalekiana*, 54, 303–323.
- Bojková, J. (2018) In memoriam Tomáš Soldán *9 November 1951–†13 August 2018. *Silva Gabreta*, 24, 257–258.