

Jürg Fischer 1936-2018 - in memoriam

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After a full and varied life, PD Dr. Jürg Fischer died in 2018, secluded in Ascona, southern Switzerland. Many elder researchers had known him from the International Symposia on Chironomidae, by actively corresponding with him or through his publications.



Jürg Fischer in Ascona, 2015. Photo: Barbara Streit-Fischer

Jürg Fischer was born in Bern and received his education as a primary school teacher and then as a secondary school teacher. He taught at various levels for several years in different schools in the canton of Bern before studying zoology, botany and chemistry at the Faculty of Natural Sciences (University of Bern). Already during his diploma thesis as well as his dissertation, was he dealing with chironomids in the department of Prof. Siegfried Rosin (Fischer 1978) at the Zoological Institute. After having finished his dissertation, "On the Reproductive Biology of *Chironomus nuditaris* Str.", he worked as a senior assistant in the aforementioned department and made essential contributions to its development. Jürg Fischer did not only have an enormously broad knowledge, but he was also very talented in practical/technical matters, which proved its worth in the development of a carefully maintained and well thought-out chironomid breeding program and the construction of sophisticated experimental set-ups. Influenced by Rosin's mathematical and biostatistical knowledge, his experiments were always far-sightedly planned with regard to their verification. After his habilitation, Fischer became heavily involved in the teaching of zoology, especially ecological genetics. Collaborators of the department regarded Jürg Fischer as a reliable colleague and friend. Thanks to his pedagogical-didactic skill, his teach-

ing at the university was very popular among biology students as well as medical or pharmaceutical students. While many truly appreciated his open and direct expression of opinion, others were less pleased with this characteristic. His insect courses and excursions were particularly well attended. Jürg Fischer was also interested in other areas of zoology. He collaborated, for example, several times in outdoor studies on the rock ptarmigan (*Lagopus muta*) in the Swiss Alps.

His list of publications manifests two main areas of chironomid research:

(1) Effects of chromosomal structures or mutations on reproduction and selection. For the time being, this work was mostly done in cooperation with Siegfried Rosin. After a six-month stay at the University of British Columbia in Vancouver, investigations were carried out in collaboration with researchers from Bern, with Dr. Herbert Tichy in Tübingen and especially with Prof. Paraskeva Michailova in Sofia as well as with Russian researchers. Particular emphasis should be laid on his original work on translocations, which was made possible thanks to his ability (acquired with patience and perseverance) to mate midges individually. Unique were, among other things, his translocation 'chromosome rings' of up to all eight chromosomes of *Chironomus nuditaris*, produced from several translocation breedings; they thus provided fundamentals for population and species vitality and for species evolution.

(2) Thanks to Fischer's basic research on the development and physiology of *Chironomus plumosus* and *Ch. nudatarsis* in particular, several studies on dormancy and eclosion activity could be carried out.

Due to the early death of Prof. Rosin and the subsequent failure to reoccupy the professorship, Jürg Fischer's internal working conditions were unfortunately to become very difficult for years, above all due to resentment and even bullying. He found consolation in his good relations with the international family of chironomid researchers. However, his early withdrawal from chironomid research was something he could not really cope with for the rest of his life.

Nevertheless, his dry sense of humour continued part of his personality. Furthermore, Jürg Fischer's ability to remember and memorize was impressive: He could quote longer literary texts or poems at will and by heart on any appropriate occasions; who else but ϕ (his usual signature abbreviation) could, just for fun, correctly recite 100 decimal places of the mathematical constant π . In addition to his manifold biological commitment, he played various musical instruments and thus counterbalanced his professional work. For years, Jürg Fischer was known in the Bernese jazz scene as an excellent bass player.

He always stayed loyal to his friends despite his gradual withdrawal in his later years, a behaviour probably also caused by health reasons. Until his death, Jürg Fischer received unwavering support from his family, consisting of his partner, his children and grandchildren. His work and his enthusiasm are an incentive for us to continue working in his spirit. In many ways, ϕ remains a role model for us all.

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Publications by Jürg Fischer on Chironomidae

Fischer, J. 1965. *Beiträge zur Biologie von Chironomus nudatarsis. Zusammenfassung von Beobachtungen und Untersuchungen aus der Zeit vom Sommer 1963 bis zum Frühjahr 1965.* Lizentiatsarbeit. Zoologisches Institut der Universität Bern. 82 p.

Rosin, S. and Fischer, J. 1965. Geschlechtsgekoppelte Inversionen bei *Chironomus nudatarsis* Str. - *Archiv der Julius Klaus-Stiftung* 40(1-4): ,26-35'.

Rosin, S. and Fischer, J. 1966. Über eine Translokation aus einer Wildpopulation von *Chironomus nudatarsis* Str. - *Archiv der Julius Klaus-Stiftung* 41(2-4): ,37-44'.

Fischer, J. and Rosin, S. 1967. Bastarde zwischen *Chironomus plumosus* L. und *Ch. nudatarsis* Str. - *Archiv der Julius Klaus-Stiftung* 42(3-4): ,30-42'.

Fischer, J. 1968. *Zur Biologie von Chironomus nudatarsis und Ch. plumosus L.* Inaugural-Dissertation. Phil.-nat. Fakultät der Universität Bern. 63 p.

Fischer, J. and Rosin, S. 1968. Einfluss von Licht und Temperatur auf die Schlüpf-Aktivität von *Chironomus nudatarsis* Str. - *Revue suisse de Zoologie* 75: 538-549. <https://www.biodiversitylibrary.org/page/43208026>

Rosin, S. and Fischer, J. 1968. Zum Selektionswert verschiedener chromosomaler Strukturtypen von *Chironomus nudatarsis* Str. - *Archiv der Julius Klaus-Stiftung* 43(3-4): ,31-40'.

Fischer, J. 1969. Zur Fortpflanzungsbiologie von *Chironomus nudatarsis* Str. - *Revue suisse de Zoologie* 76: 23-55. <https://www.biodiversitylibrary.org/page/43220769>

Fischer, J. and Rosin, S. 1969. Das larvale Wachstum von *Chironomus nudatarsis* Str. - *Revue suisse de Zoologie* 76: 727-734. <https://www.biodiversitylibrary.org/page/43221495>

Rosin, S. and Fischer, J. 1972. Y-Polymorphismus bei *Chironomus nudatarsis*. - *Archiv für Genetik* 45: 100.

Rosin, S. and Fischer, J. 1972. Polymorphismus des Realisators für männliches Geschlecht bei *Chironomus*. - *Revue suisse de Zoologie* 79(Fasc.suppl.): 119-141.

Fischer, J. 1974. Experimentelle Beiträge zur Ökologie von *Chironomus* (Diptera). I. Dormanz bei *Chironomus nudatarsis* und *Ch. plumosus*. - *Oecologia* 16: 73-95. <https://doi.org/10.1007/BF00345089>

Bertogg, A. and Fischer, J. 1978. Zur Kotabgabe-Intensität und Bewegungsaktivität dormanter und nicht-dormanter Larven von *Chironomus plumosus* (Diptera). - *Revue suisse de Zoologie* 85: 817-822. <https://www.biodiversitylibrary.org/page/41326819>

- Fischer, J. 1978. Zum Problem der Chromosomen-Evolution durch Translokationen bei *Chironomus* (Diptera). - *Archiv für Genetik* 51: 73-98.
- Fischer, J. 1978. Siegfried Rosin 1913-1976. - *Chironomus* 2: 6-7.
- Fischer J. 1978. Die Zuckmücken des Wohlensees (Chironomus). In Naturforschende Gesellschaft in Bern (Ed.) *Die Aare und ihre Wasser*. NGB, pp. 15-16.
- Fischer, J. and Tichy, H. 1978. Über eine Heterochromatin-Mutation aus einer Wildpopulation von *Chironomus nuditaris*. I. Zur Funktion des veränderten Genom-Abschnittes. - *Archiv für Genetik* 51: 244.
- Pulver, U. and Fischer, J. 1978. Über eine Heterochromatin-Mutation aus einer Wildpopulation von *Chironomus nuditaris*. II. Zum Replikationsverhalten des veränderten Genomabschnittes. - *Archiv für Genetik* 51: 244.
- Ineichen, H., Riesen-Willi, U. and Fischer, J. 1979. Experimental Contributions to the Ecology of *Chironomus* (Diptera). II. The Influence of the Photoperiod on the Development of *Chironomus plumosus* in the 4th Larval Instar. - *Oecologia* 39: 161-183. <https://doi.org/10.1007/BF00348066>
- Reist, A. and Fischer, J. 1979. Ökologische und biometrische Untersuchungen an *Chironomus*-Larven (Diptera) des Wohlensees bei Bern. - *Revue suisse de Zoologie* 86: 893-899. <https://www.biodiversitylibrary.org/page/41328985>
- Adamek, G. and Fischer, J. 1980. Zur Atmungsintensität, Bewegungsaktivität und Herztätigkeit nicht dormanter und dormanter Larven von *Chironomus plumosus*. In Murrey, D.A.(Ed.) *Chironomidae – ecology, systematics, cytology and physiology. Proceedings of the 7th International Symposium on Chironomidae, Dublin, August 1979*. Pergamon Press, pp. 53-58.
- Fischer, J. and Tichy, H. 1980. Über eine Heterochromatin-Mutation aus einer Wildpopulation von *Chironomus nuditaris*. I. Zur Funktion des veränderten Genom-Abschnittes. - *Genetica* 54: 41-43. <https://doi.org/10.1007/BF00122406>
- Pulver, U. and Fischer, J. 1980. Über eine Heterochromatin-Mutation aus einer Wildpopulation von *Chironomus nuditaris*. II. Zum Replikationsverhalten des veränderten Genomabschnittes. - *Genetica* 54: 87-90. <https://doi.org/10.1007/BF00122412>
- Michailova, P. and Fischer, J. 1983. Cytogenetic studies on *Chironomus plumosus* L. (Diptera, Chironomidae) from different populations and their experimental hybrids. - *Memoirs of the American Entomological Society* 34: 211-221. <https://www.biodiversitylibrary.org/page/38623081>
- Adamek, G. and Fischer, J. 1985. The oxygen consumption of non-dormant and dormant larvae of *Chironomus plumosus* (Diptera). - *Journal of Insect Physiology* 31(10): 767-772. [https://doi.org/10.1016/0022-1910\(85\)90069-1](https://doi.org/10.1016/0022-1910(85)90069-1)
- Michailova, P. and Fischer, J. 1986. *Chironomus vancouveri* sp. n. from Canada (Diptera, Chironomidae). - *Reichenbachia* 23: 99-106.
- Michailova, P. and Fischer, J. 1986. Speciation within the *plumosus* group of the genus *Chironomus* Meigen (Diptera, Chironomidae). - *Zeitschrift für zoologische Systematik und Evolutionsforschung* 24(3): 207-222.
- Reist, A. and Fischer, J. 1987. Experimentelle Untersuchungen zur Einwirkung von Temperatur und Besiedlungsdichte auf die Entwicklung der *Chironomus*-Arten *Ch. plumosus*, *Ch. nuditaris* und *Ch. bernensis* (Diptera). - *Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere* 114: 1-13.
- Fischer, J. and Ineichen, H. 1988. The Diurnal Eclosion Activity of *Chironomus nuditaris* (Diptera) in the Course of the Seasons. - *Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere* 115: 93-115.
- Rychen Bangerter, B. and Fischer, J. 1989. Different Dormancy Response in the Sympatric *Chironomus* Species *Ch. plumosus* and *Ch. nuditaris*. - *Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere* 116: 145-150.
- Fischer, J., Ineichen, H. and Adamek, G. 1990. Circadian Clock and Eclosion Activity of *Chironomus* (Dip-

- tera, Chironomidae). - *Zoologische Jahrbücher. Abteilung für Systematik, Ökologie und Geographie der Tiere* 117: 317-329.
- Michailova, P., Matena, J. and Fischer, J. 1990. The classification of different *Chironomus plumosus* (L.) populations after the homozygous inversion types of polytene chromosomes. In: Országh, I. (Ed.) *Abstract Volume. 2nd International Congress on Dipterology, August 27 - September 1 1990*. Department of Zoology, Faculty of Natural Sciences, Comenius University Bratislava, p. 155.
- Fischer, J. 1991. Zur Didaktik der klassischen Genetik und Cytologie. - *Chemie und Biologie* 35(3): 24-30.
- Filippova, M.A., Kiknadze, I.I., Aimanova, K.G., Blinov, A.G., Fischer, J. and Kolesnikov, N.N. 1991. Chromosomal homologies among Chironomid species determined by in situ hybridization. In: van de Bund, W.J., Gardeniers, J.J.P. and Kraak, M.H.S. (Ed.) *Abstract volume. 11th International Symposium on Chironomidae, 12-14 August 1991*. University of Amsterdam, p. 17.
- Fischer, J. and Adamek, G. 1991. Ecllosion behaviour of sympatric and allopatric *Chironomus* species. In: van de Bund, W.J., Gardeniers, J.J.P. and Kraak, M.H.S. (Ed.) *Abstract volume. 11th International Symposium on Chironomidae, 12-14 August 1991*. University of Amsterdam, p. 18.
- Filippova, M.A., Kiknadze, I.I., Aimanova, K.G., Fischer, J. and Blinov, A.G. 1992. Homology of Balbiani rings among chironomid species and localization of a new mobile element on the polytene chromosomes. van de Bund, W.J. and Kraak, M.H.S. (Ed.) *Proceedings. 11th International Symposium on Chironomidae, 12-14 August 1991*. University of Amsterdam. - *Netherlands Journal of Aquatic Ecology* 26: 123-128.