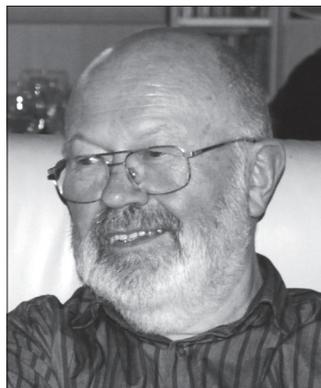


Obituary



Prof. Dr. habil.
Jean-Marie Betsch

* December 5th, 1939
† February 18th, 2013

Jean-Marie Betsch was born on 5 December 1939 in Velaines (Meuse, France). He died on 18 February 2013 in Brunoy (Essonne, France) where he was still working at the Laboratory of General Ecology of the Muséum National d'Histoire Naturelle (MNHN) located in Brunoy.

After secondary studies at the École Normale Primaire (a teacher's college) of Montigny-les-Metz (1960–1963) he was a primary school teacher in Saint-Avold (1958–1959) then effected his higher education at the University of Nancy (1960–1963) where he met, during his master's degree DES (Diplôme d'Études Scientifiques) at the Laboratory of Zoology, his future colleagues from the team of Professor Delamare-Deboutteville (Claude and Françoise Monniot, Jean-Marc Thibaud, Zaher Massoud, Guy Vannier).

He was recruited as an assistant professor in 1963 in the Laboratory of General Ecology of the MNHN, where he made his career and was appointed as a full professor from 1994 to 2009. Then he retired but remained active as professor emeritus up to the time of his death.

He also served on the CNU (Conseil National des Universités), in charge of the evaluation of candidates for a university position, the commission of specialists and the scientific Council of the MNHN and participated in numerous conferences and symposia. He combined his scientific work with a project manager position at the PIREN (Programme Interdisciplinaire de Recherches en Environnement), an office in charge of the development of interdisciplinarity (1990–1998) and was strongly involved in master's degree interdisciplinary teaching.

He made numerous field missions, especially in Madagascar (1965–1973) and French Guiana

(1977–2002), then in Gabon (2005–2012). He worked especially on Collembola Symphypleona. He was interested in their morphology and anatomy during the life cycle (ontogeny), their ecophysiology, the modalities of their reproduction, their adaptation to aerial life and their systematics and phylogeny, this often in collaboration with Guy Vannier, Zaher Massoud and his wife Marie-Christine Betsch-Pinot.

He also worked on the ecology of soil and litter in temperate and tropical rainforests in Madagascar and French Guiana. He maintained his state thesis (doctorat d'état) in 1978 on Collembola Symphypleona (systematics, morphology, anatomy, ecology in Madagascar).

As part of the Biosystematics he applied the concepts of phylogenetic systematics to the taxonomic study of the group. He thus revised the discrete variables that constitute chaetotaxy to establish general and specific cladograms. His descriptions of new taxa, with Pierre Nayrolles, are invaluable contributions to the establishment of worldwide standards proposed for the description of Symphypleona. He created 18 novel genera and described 45 novel species.

As part of the study of the biogeography of Madagascar, he analyzed microarthropod groups living in soil and litter: Collembola, Protura, Diplura, Pauropoda and Ostracoda. The origins and causes of their distribution differ between zoological groups and are governed by the antiquity of the group and its position in the soil-litter-atmosphere gradient in open environments.

In the frame of field ecology he participated in an interdisciplinary program of the CNRS (Centre National de la Recherche Scientifique) by studying soil microarthropod communities influenced by crop practices in forest islands areas of intensive agriculture in France. He also performed a study of soils in the drawdown area of the dam of Petit-Saut in French Guiana.

He also dealt with the interactions between the dynamics of resources and human uses in the context of a SOFT (tropical soils and forests) program with Serge Bahuchet in French Guiana. He studied the structural profiles of soils and soil fauna communities depending on slash-and-burn practices (shifting cultivation) and ages of forest regrowth. He further extended these studies

to Gabon in Africa, working in collaboration with many human scientists.

He also gave background in the dissemination of knowledge, education and museology in the MNHN as one of French Institutes of Higher Education. He was finally in charge of the national collection of Collembola Symphypleona located at that time at the Laboratory of Ecology in Brunoy.

We cannot close this obituary without a warm recall of his well-known love of choral singing and guitar.

Jean-Marc Thibaud, Jean-François Ponge
Muséum National d'Histoire Naturelle, Paris, France

Short account of major publications of Jean-Marie Betsch in the frame of soil biology and ecology, selected among ca. 80 publications

Massoud, Z. & J. M. Betsch (1972): Étude sur les insectes collemboles. II. Les caractères sexuels secondaires des antennes des Symphypléones – *Revue d'Écologie et de Biologie du Sol* **9**: 55–97.

Betsch, J. M. (1980): Éléments pour une monographie des Collemboles Symphypléones (Hexapodes, Aptérygotes). – *Mémoires du Muséum National d'Histoire Naturelle, Série A* **116**: 1–227.

Betsch J. M., M. Betsch-Pinot & Y. Mikhalevitch (1981): Évolution des peuplements de microarthropodes du sol en fonction des traitements subis par une forêt dense humide en Guyane française. – *Acta Ecologica, Ecologia Generalis* **2**: 245–263.

Betsch, J. M., G. Kilbertus, M. M. Couteaux & G. Vannier (1990): Microflore et faune du sol: indicateurs biologiques de la transformation de la forêt tropicale humide en agrosystème. – In: Sarrailh, J. M. (Ed.), *Mise en valeur de l'écosystème forestier guyanais: opération ECEREX*. INRA, Paris, 209–270.

Massoud, Z., J. M. Betsch & J. M. Thibaud (1984): Expérience de piétinement contrôlé du sol d'une forêt périurbaine: effets sur le peuplement de Collemboles – *Revue d'Écologie et de Biologie du Sol* **21**: 507–518.

Nayrolles, P. & J. M. Betsch (1993): Pour une théorie de la description chétotaxique chez les Collemboles. – *Annales de la Société Entomologique de France* **29**: 5–15.

Betsch, J. M. & J. P. Cancela Da Fonseca (1995): Changes in edaphic factors and microarthropod communities after clearing and burning in a tropical rain forest in French Guyana. – *Acta Zoologica Fennica* **196**: 142–145.

Betsch J. M. (2001): La biodiversité dans les sols forestiers: quelle importance pour le fonctionnement et les usages de la forêt? – *Bois et Forêts des Tropiques* **268**: 69–79.

Betsch, J. M. (2012): L'agriculture itinérante sur brûlis: quelques pratiques particulières des Pygmées du Gabon et les raisons qu'ils en donnent. – *Journal des Africanistes* **82**: 193–205.