

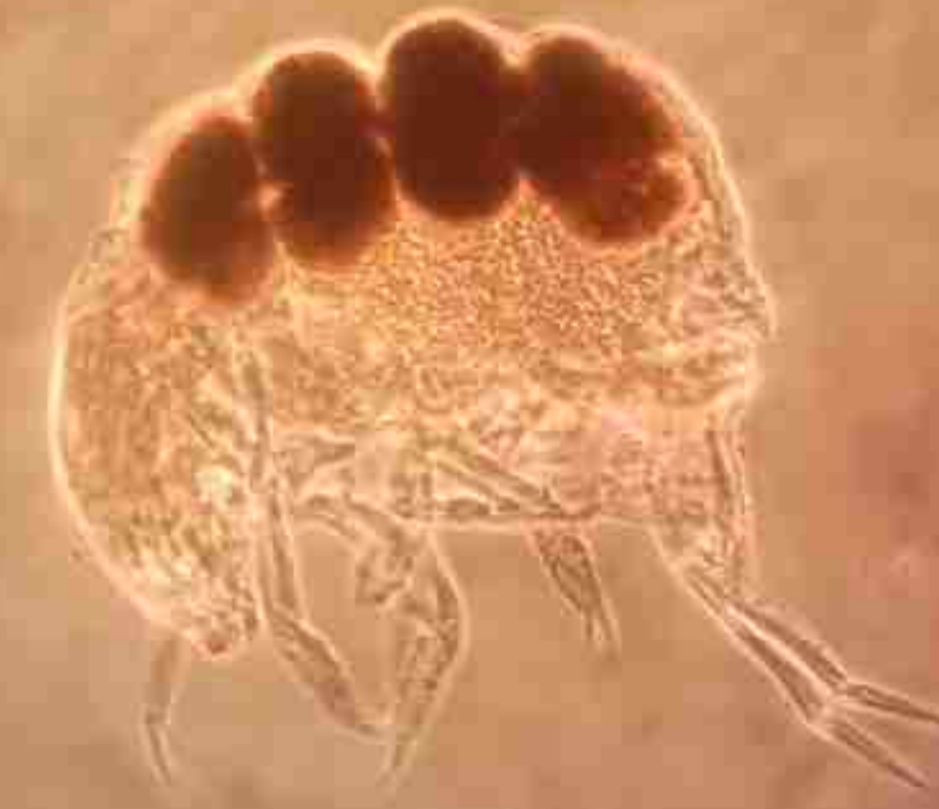
# The Collembola fauna of Belgian caves

Janssens, F. <sup>1</sup>, Dethier, M. <sup>2</sup> & De Bruyn, L. <sup>1</sup>

<sup>1</sup> Department of Biology, University of Antwerp, 2020 Antwerp, Belgium

<sup>2</sup> Unité d'Entomologie fonctionnelle et évolutive, Faculté universitaire des Sciences agronomiques, 5030 Gembloux, Belgique

Recent surveys, undertaken by the "Club de Recherches Spéléologique Ourthe-Ambève" (CRSOA) and "Les Chercheurs de la Wallonie", between 1998 and 2002, in 42 natural and artificial subterranean caves in Wallonie, Belgium, revealed 56 species of Collembola. In 2005, three non-troglobitic species are recorded for the first time for the Belgian Collembola fauna: *Mucrosomia garretti* (Bagnall, 1939), *Isotomurus plumosus* Bagnall, 1940, and *Entomobryoides purpurascens* (Packard, 1872). The onychiurid *Deharvengiurus severini* (Willem, 1902), endemic to Belgian caves, and the trogliphyl tomocerid *Plutomurus unidentatus* (Börner, 1901) have been confirmed. On the contrary, the cave neanurid *Gisinea delhezi* Massoud, 1965 and the entomobryid *Pseudosinella vandeli* Denis, 1923 were not found. Recently (2005), the troglitic hypogastrurid *Acherontiella cassagnai* Thibaud, 1967, a fourth species new to the Belgian fauna was found in Lanaye (to be published).



Megalothorax minimus



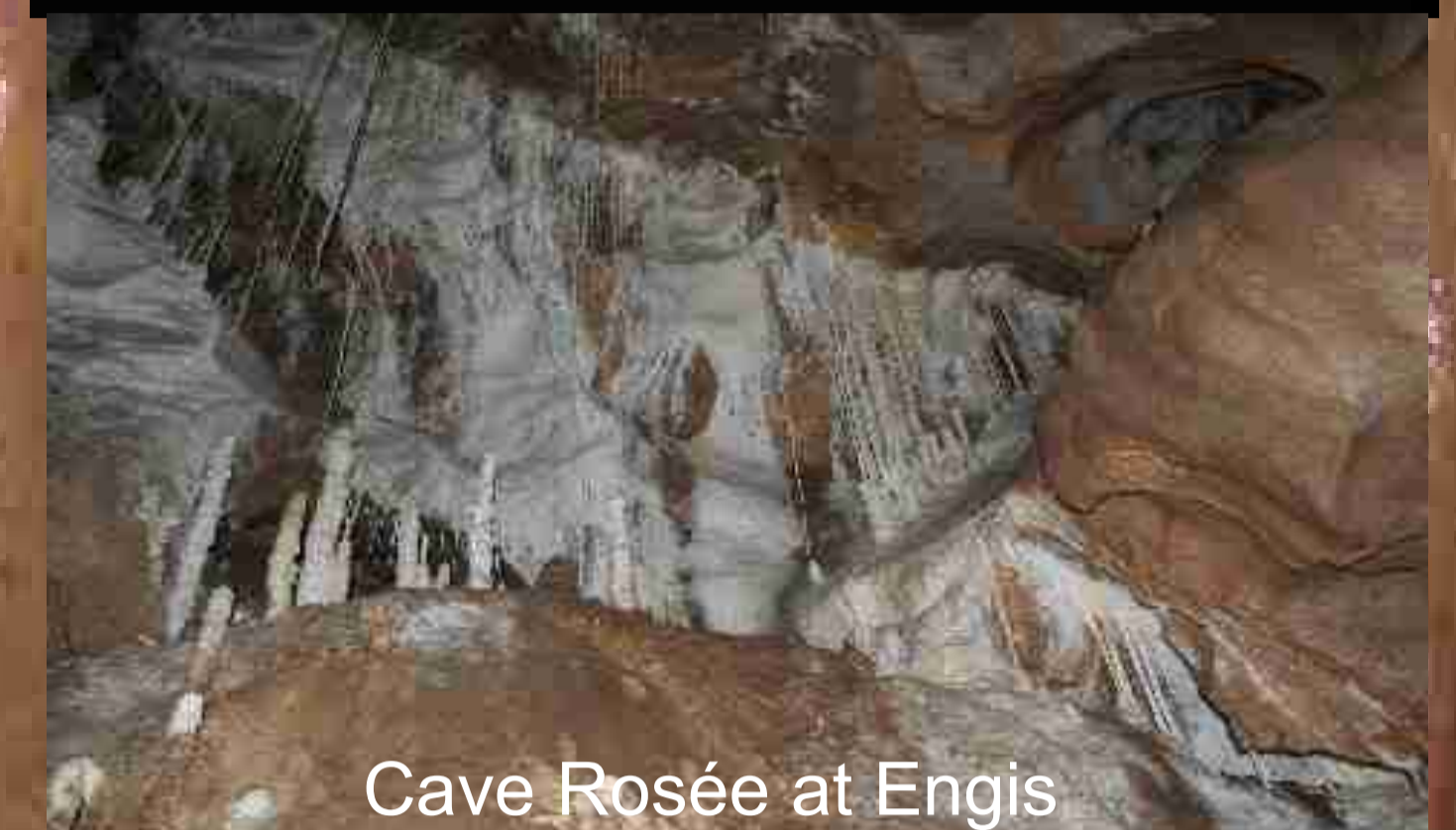
Plutomurus unidentatus



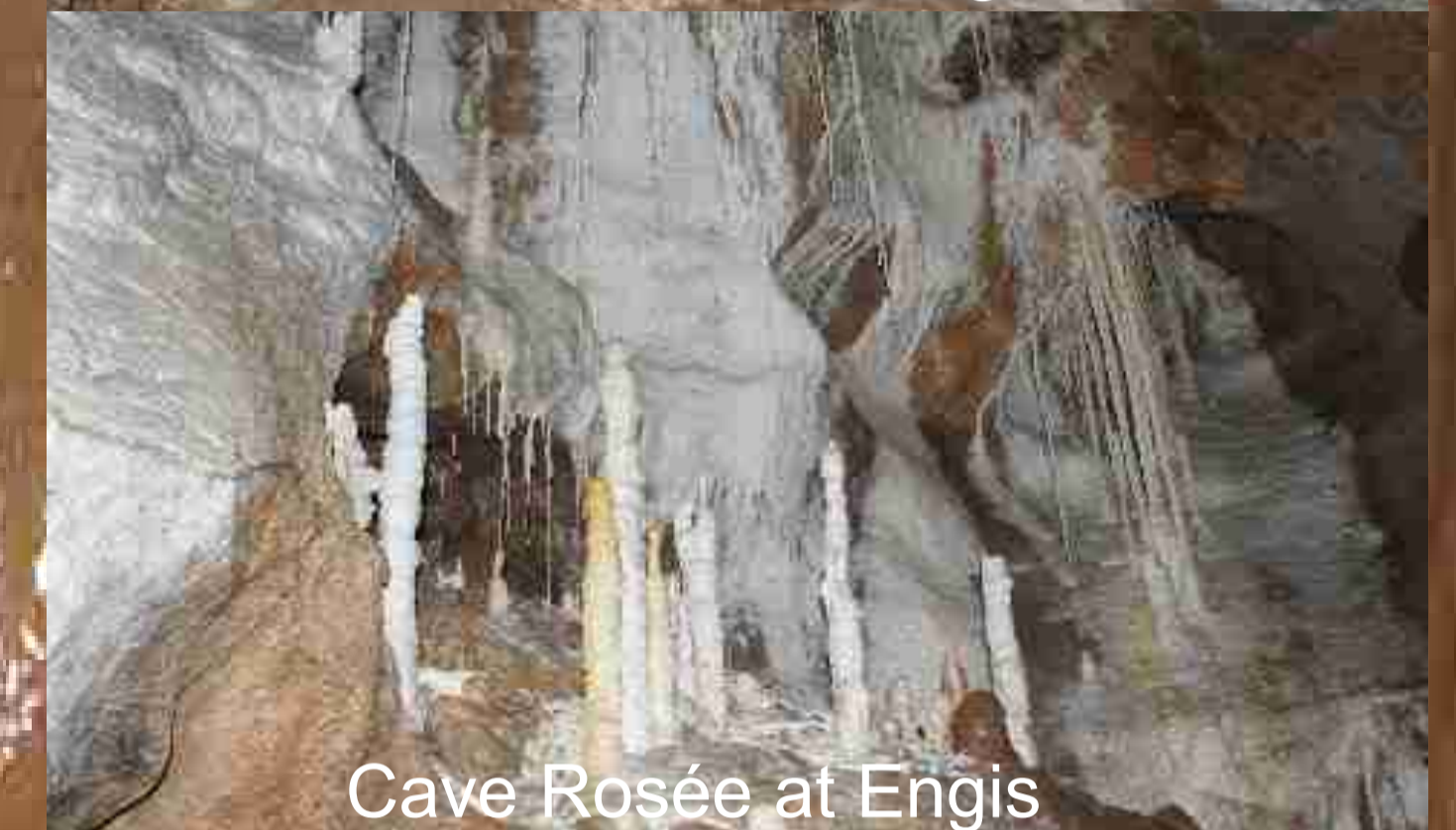
Arrhopalites pygmaeus

Comparison of mainly troglitic Collembola species found before and after 1998. Data are number of caves / number of occurrences

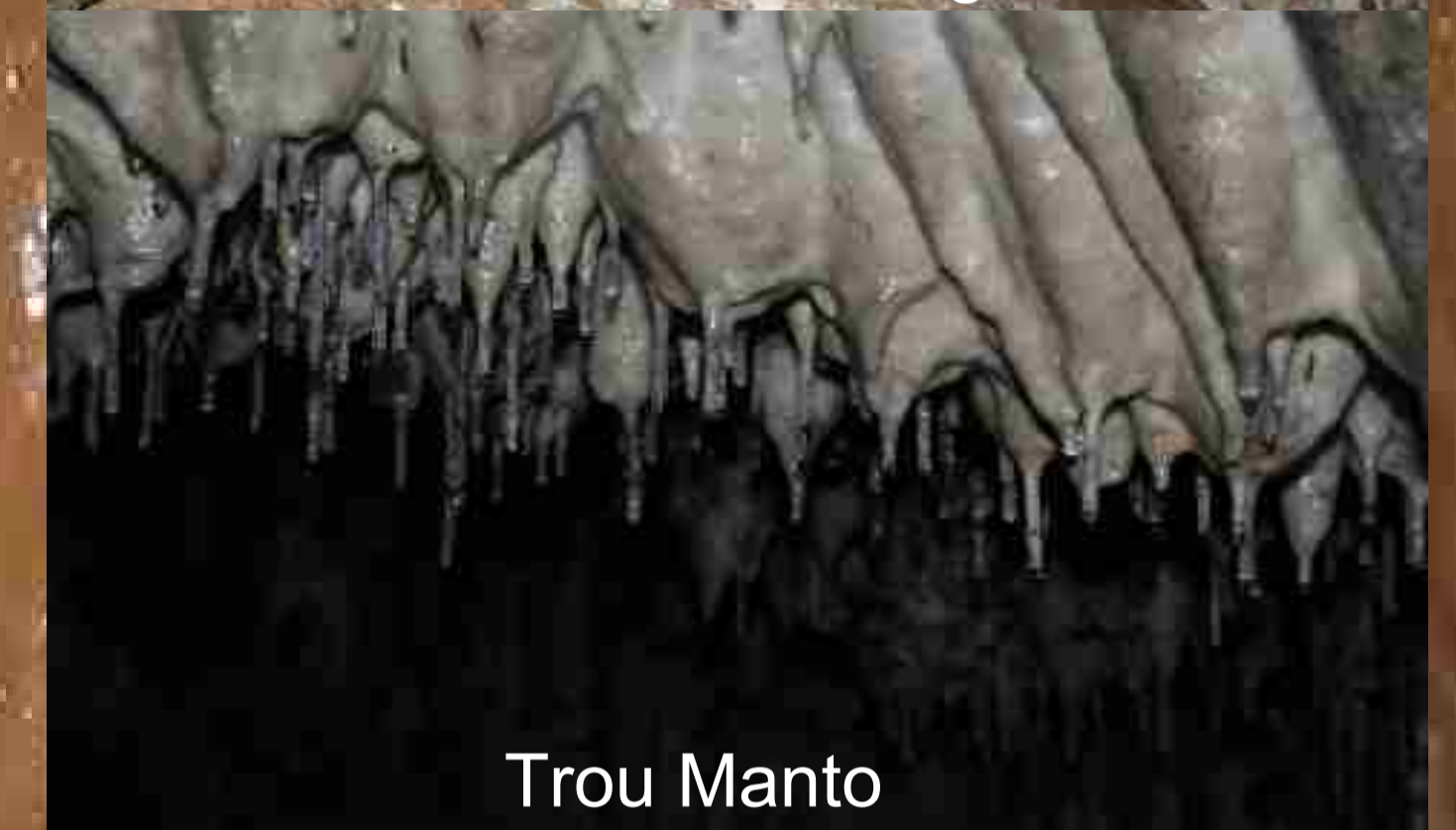
Families	Genus and species	< 1998	≥ 1998
Hypogastruridae	<i>Schaefferia willemi</i> (Bonet, 1930)	6/11	11/30
Onychiuridae	<i>Deharvengiurus severini</i> (Willem, 1902)	9/12	4/11
Entomobryidae	<i>Pseudosinella vandeli</i> Denis, 1923	2/4	0/0
Tomoceridae	<i>Plutomurus unidentatus</i> (Börner, 1901)	2/2	1/2
Neanuridae	<i>Gisinea delhezi</i> Massoud, 1965	3/4	1/1
Neelidae	<i>Neelus murinus</i> Folsom, 1896	1/1	3/5
Arrhopalitidae	<i>Arrhopalites pygmaeus</i> (Wankel, 1860)	13/13	22/33
	<i>Arrhopalites bifidus</i> Stach, 1945	2/2	3/5
	<i>Arrhopalites caecus</i> (Tullberg, 1871)	0/0	3/3



Cave Rosée at Engis



Cave Rosée at Engis



Trou Manto



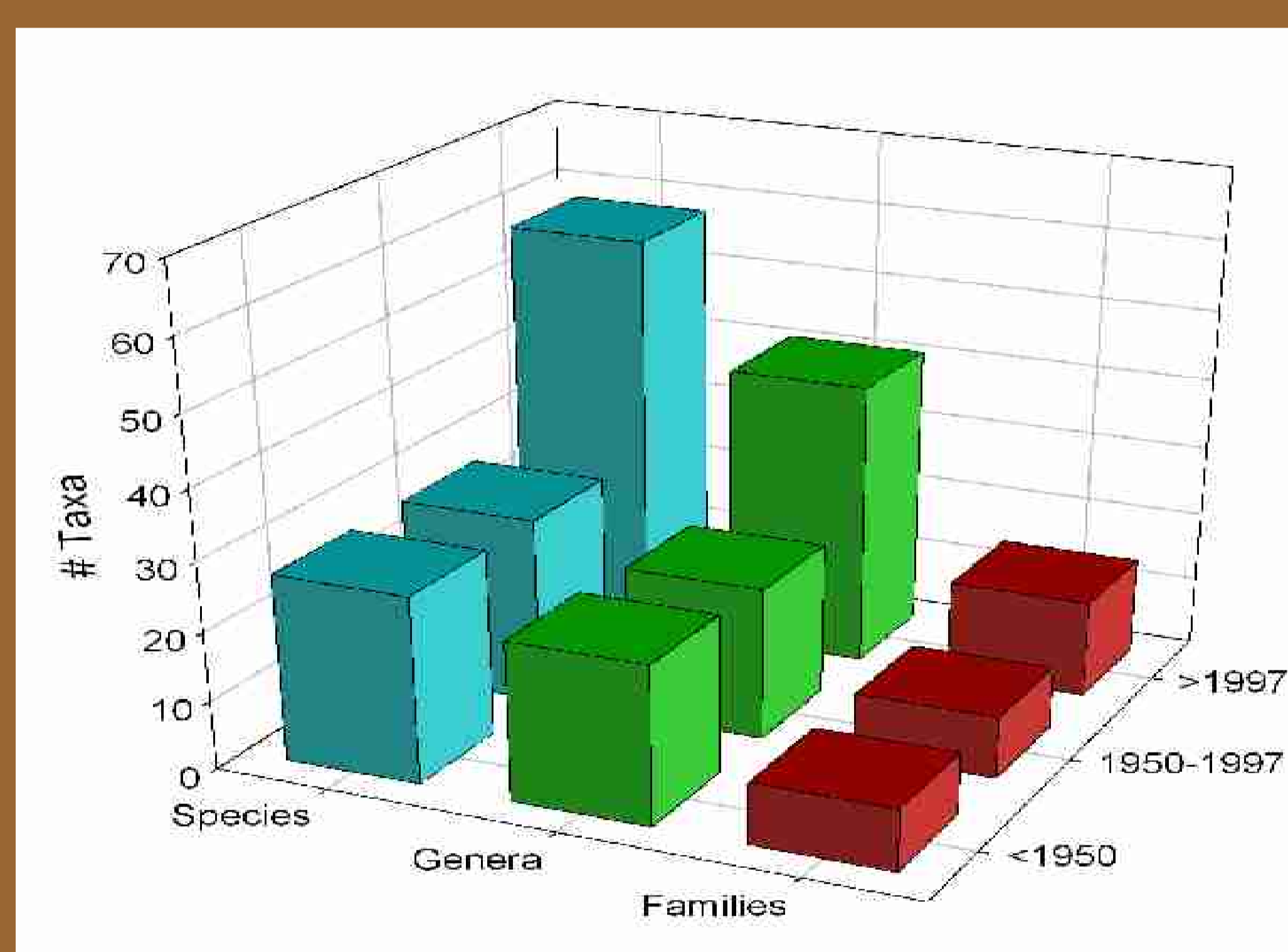
Looking for springtails in Rosée



Cave Rosée at Engis



Trou Manto



Progress in the knowledge of the cave Collembola from Belgium. Recent cave explorations doubled the number of species known.

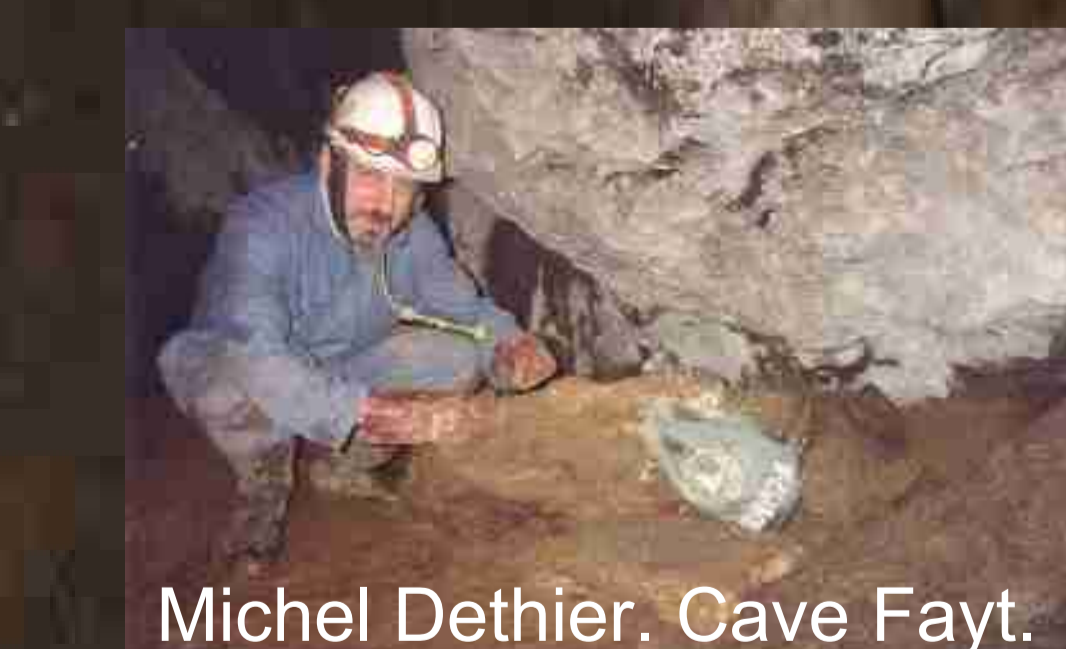


Folsomia candida

One species of *Oncopodura*, new to science, close to *Oncopodura egerszoegensis* Loksa, 1961, is to be described.



Oncopodura sp. nov.



Michel Dethier, Cave Fayt.

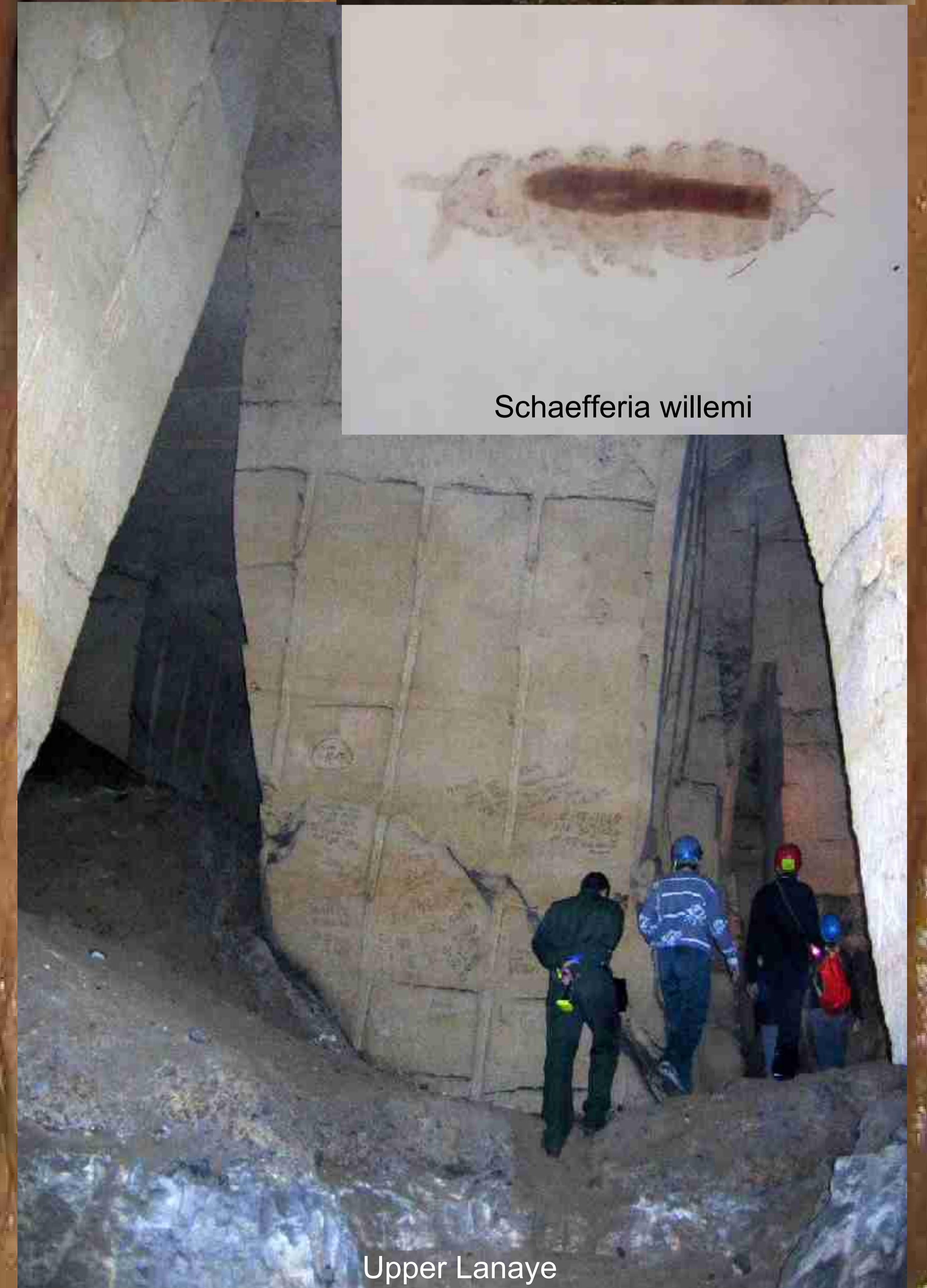
Collembola specimens are collected using a mouth operated exhauster.



CRSOA members searching for underground fauna in Lanaye



Schaefferia willemi



Upper Lanaye

## References:

- Delhez, F., Gilson, R. & Hubart, J.-M. 1973. Le Laboratoire souterrain de Ramioul (Ramet, Province de Liège). Les Naturalistes Belges, Tome 54, No 9, Novembre 1973, p.409-421.  
 Delhez, F., Dethier, M. & Hubart, J.-M. 1999. Contribution à la connaissance de la faune des grottes de Wallonie. Bulletin des Chercheurs de la Wallonie, XXXIX, 1999, p.27-54.  
 Dethier, M. 1998. La collection Delhez. 1. Catalogue provisoire. Bulletin des Chercheurs de la Wallonie, XXXVIII, 1998, p.33-76.  
 Dethier, M. & Hubart, J.-M. 2000. La collection Delhez. 2. Corrigenda et addenda. Bulletin des Chercheurs de la Wallonie, XL, 2000, p.17-35.  
 Dethier, M. & Hubart, J.-M. 2000. La récolte de la faune cavernicole (Collembola included). Regards, Bull. de l'UBS, 2000, 38, p.2-5.  
 Dethier, M. & Hubart, J.-M. 2003. Nouvelles récoltes et observations concernant la faune souterraine de Wallonie (Collembola included). Bulletin des Chercheurs de la Wallonie, XLII, 2003, p.46-56.  
 Janssens, F. & Dethier, M. 2005. Contribution à la connaissance des Collembolés des milieux souterrains de Belgique. Bulletin des Chercheurs de la Wallonie, XLIV, 2005, 145-165.  
 Hubart, J.-M. & Dethier, M. 1999. La faune troglite de Belgique: état actuel des connaissances et perspectives. Bulletin de la Société royale Belge d'Entomologie, Juillet-Décembre, 135 (VII-XII), p.164-178.  
 Leruth, R. 1939. La biologie du domaine souterrain et la faune cavernicole de la Belgique. Ordre Collembolés. Mémoires du Musée Royal d'Histoire Naturelle de Belgique, Mémoire n° 87, p.194-201.

Background = cave Pont d'Avignon-Nismes

Cave photographs by A. Dubois, L. Willems and D. Lavend'homme. Collembola photographs by F. Janssens.