The arachnid collection at the Biology Centre of the Upper Austrian Museums (Linz, Austria), including types of 15 taxa, and notes on a spider exhibition

Autor(en): **Aescht, Erna**

Objekttyp: **Article**

Zeitschrift: **Contributions to Natural History : Scientific Papers from the Natural History Museum Bern**

Band (Jahr): **- (2009)**

Heft 12/1

PDF erstellt am: **30.06.2024**

Persistenter Link: https://doi.org/10.5169/seals-786961

The arachnid collection at the Biology Centre of the Upper Austrian Museums (Linz, Austria), including types of 15 taxa, and notes on a spider exhibition

Erna Aescht

ABSTRACT Contrib. Nat. Hist. 12: 23–52.

On occasion of a recent inventory of the arachnid collection at the Biology Centre of the Upper Austrian Museums in Linz (Austria, acronym OLML), an outline of the history and the holdings is presented. The origin of the arachnid collection dates back to the end of the 19th century. A curatorship for the collections "diverse invertebrates" excluding insects exists since 1992. Main contributors are the entomologists Josef Petz, Hermann Priesner, Helmut Hamann, and the arachnologists Ingmar Weiss, who also revised the old stock, and Konrad Thaler with his working group. Currently more than 5200 lots of about 800 taxa are deposited, mainly from Central Europe. The OLML holds type material of 15 arachnid taxa including three holotypes and syntypes of two species; included are types of Pseudoscorpiones (three species, one subspecies), Acari (eight species) and Araneae (three species), described by the authors Beier, Haitlinger, Relys & Weiss, Buchar & Thaler, Muster & Thaler. The data on determined species are maintained in an Access database, which will be moved to the relational database ZOBODAT within the next few years. Our publication activities concerning arachnology, papers related to the collection and experiences with a spider exhibition are summarised.

Keywords: Chelicerata, Arachnida, history of the holdings, collectors, type specimens, publication activities, arachnophobia.

Introduction

The purpose of this paper is to open the arachnid collection and arachnological activities of a provincial museum for the public. As an outcome of the inventory, the diversity of arachnid orders represented in our collection is compared to that known for Austria and Upper Austria, respectively. An uncom-

mented list of nine name-bearing types deposited in the Biology Centre of the Upper Austrian Museums at Linz was published by Aescht (2003a) on the occasion of the ten years anniversary of this institution. More detailed specimen data for the types are published here in a printed version, as recommended in article 72F of the ICZN (1999). Moreover, some experiences with a spider exhibition and our publication activities concerning arachnology in Upper Austria and beyond are summarised. Hopefully in future, Austrian and foreign students and taxonomists will be attracted by the collection and the exchange of scientific publications will increase.

This paper is dedicated to Konrad Thaler (1940–2005), who significantly contributed to the arachnid collection in Linz and promoted the popularisation of arachnology also in Upper Austria. We met each other as soil zoologists 20 years ago and later on, climbing in the Caucasus and, some months before his too early death, in the Ötztal Alps. His outstanding personality – both as scientist and colleague – will be unforgettable.

History of the collection

Although the Upper Austrian Museums may be traced back to 1833, arachnids have been sparsely referred to in corresponding reports: in 1875 they are noted "as hidden behind insects" and on the occasion of the opening of the "Museum Francisco Carolinum" on 29th May 1895 by the Austrian Emperor Franz Josef exactly one tableau, including a bird-eating spider and a huge black scorpion, was presented (for details see Aescht 2003b).

Probably, on the initiative of the first zoological curator, the vertebratologist Theodor Kerschner (1885–1971), the famous Viennese scientist Max Beier (1903–1979; cp. Thaler & Gruber 2003) identified the pseudoscorpions of the museum during his holidays in 1937 and published his results on 23 species, including descriptions of four new taxa (Beier 1939).

From 1952 to 1991 the entomologists Helmut Heinrich Franz Hamann (1902–1980), Günther Theischinger (born 1940), and Fritz Gusenleitner (born 1957) have been jointly responsible for arachnids. On demand of the arbitration court of the agricultural health insurance, Hamann (1965) prepared an expertise (available as manuscript) on the occurrence of ticks (Ixodidae) in Upper Austria. In 1992 a curatorship for the collections of "diverse invertebrates" excluding insects (department "Evertebrata varia") was established, kept by me, a trained ciliate taxonomist and ecologist (for further details see Aescht 2003a). Due to the much more comprehensive collections of ciliates

and molluscs, no arachnologist ever held a permanent position in the museum; no preparator accompanies the "department".

Concerning spiders, the largely undetermined "old" alcohol material, comprising more than 2000 specimens of Araneae and Opiliones (166 and 11 species, respectively), was revised by Ingmar Weiss (at that time St. Oswald; Bavaria) in 1997. As a curatorial outcome since 1992, an Access database containing taxonomic and locality informations as well as inventory numbers has been established. At present 4212 records are included, of which 3343 are determined to species and 507 to genus or family level. The undetermined and unrecorded material has been arranged according to orders and zoogeographical regions in order to provide easy access for interested researchers. In addition, the nomenclature and family placement of the main collection has been updated mostly according to the catalogues of Blick & Komposch (2004) and Blick & al. (2004a, b). The collection catalogue will be moved to our relational database (ZOBODAT; cp. Malicky & al. 2003) within the next few years. Apart from biogeographical data, you can also find biographies and bibliographies of many Austrian biologists at www.zobodat.at.

Actual work mainly concerns the possible toxicity of spiders worried about by the public; continual urgent determinations of Mag. Peter Freudenthaler, who finished his doctoral thesis advised by Konrad Thaler in 2002 and is the single active spider expert in Upper Austria, are greatly acknowledged. More efforts are necessary to find taxonomists willing to perform necessary determination work and to arrange the collection systematically.

Holdings of the collection

Due to the frequent entomological provenance, quite a portion of the collection is represented as dry, pinned specimens, instead of the better suited alcohol preservation (Tab. 1). 176 microscopic slides, mainly in Acari from the productive Polish acarologist Ryszard Haitlinger (46 slides), further go back to Bruno Maria Klein (1891–1968; 33 slides), preparator of the Natural History Museum in Vienna and famous discoverer of the ciliate silverline system, and Ewald Schild (1899–1962; 15 slides), who established a microbiological station in Linz from 1954 to 1962 (biographies of Klein and Schild see Aescht 1994).

The oldest parts of the collection may date back to the end of the 19th century: most bird spiders and representatives of diverse arachnid orders (e.g. the xiphosuran *Limulus polyphemus*) come from Georg Wieninger (1859–1925), a pionier of agriculture in Schärding and Otterbach (Upper Austria) as well

Order / number of taxa or series	Named taxa	Det. with loc.	Det. without loc.	Undet. with loc.	Undet. without loc.
Alcohol collection	**669**	**3171**	**5**	**1007**	**4**
Acari	2	3	–	180	4
Araneae	598	2567	2	620	–
Opiliones	45	252	–	63	–
Palpigradi	1	1	–	–	–
Pseudoscorpiones	22	347	2	82	–
Scorpiones	1	1	1	60	–
Solifugae	–	–	–	2	–
Dry collection	**70**	**78**	**67**	**493**	**278**
Acari	2	–	–	110	3
Amblypygi	–	–	–	–	4
Araneae	31	3	52	178	100
Opiliones	3	3	–	6	–
Pseudoscorpiones	19	62	–	172	35
Scorpiones	12	9	11	21	133
Solifugae	3	–	–	6	–
Uropygi	–	–	–	–	3
Xiphosura	2	1	4	–	–
Slide collection	**76**	**106**	**29**	**10**	**31**
Acari	67	101	9	9	14
Araneae	8	5	19	1	16
Opiliones	–	–	–	–	1
Pseudoscorpiones	1	–	1	–	–
Total	**795**	**3352**	**101**	**1510**	**313**

Tab. 1. Summary of the OLML arachnid collection, including lots not yet in the database (31 July 2006). Pantopoda and Ricinulei are not present in the holdings. det. = determined, loc. = locality, undet. = undetermined.

as Paraguay, where he ran a coffee plantation in Bernalcue near Asuncion, province San Bernardino from about 1890 until 1911. After insolvency, his mainly vertebratological collection was purchased by the Upper Austrian government in 1939.

Numerous samples of spiders and false scorpions from the entomologist Josef Petz (1866–1926) date from the early 20th century. Further important collectors in the first half of this century are Josef Kloiber (1872–1955), Hermann Priesner (1891–1974) and Helmut Heinrich Franz Hamann (1902–1980). From 1960 to the early 1990s only few local series were obtained. Since 1996, the largest increase of the collection is due to Ingmar Weiss and Konrad Thaler, including his working group at the University of Innsbruck (particularly

Barbara Knoflach, Maria Theresia Noflatscher, Karl-Heinz Steinberger und Antje Trenkwalder). Each of these donations includes about 1200 series with a geographical focus on Germany (900 lots), Romania (272 lots) and Upper Austria (235 lots), Tyrol (467 lots) and Italy (328 lots), respectively.

Recent collectors are moreover Lenka Kubcová (Czech Republic, Araneae), Jiri Halada, M. Snizek, Hubert Rausch (from many countries listed in Rausch & Rausch 2004), Franz Ressl, E. Schneider, and the family Malicky with undetermined material of diverse arachnid orders largely from extra-European countries, such as Albania, Borneo, Brazil, Canada, Chile, Cyrenaika, Egypt, Georgia, Guatemala, Guinea, India, Indonesia, Israel, Kenya, Libya, Malawi, Mexico, Mozambique, Peru, Russian Federation, Senegal, South Africa, Syrian Arab Republic, Tanzania, Thailand, Venezuela, Volta, Zimbabwe. For Upper Austria, this collection is the most comprehensive official one.

Some details concerning the orders (arranged according to "diversity") summarised in Table 1 are worth noting.

Palpigradi: The single specimen of *Eukoenenia spelaea* was collected by Franz Ressl in Lower Austria in 1996.

Scorpiones: About 200 specimens, mostly in dry condition and undetermined; recent samplings are from the Mediterranean, Syrian Arab Republic, Venezuela and Zimbabwe. Of the registered samples (14 species), two belong to the Wieninger collection of Paraguay, two each are from Guatemala and Java, four *Euscorpius* samples from the Mediterranean and one found 2002 in Linz (probably introduced). Several bred specimens of unknown origin have been freeze-dried after the exhibition in 2004 (see below).

Opiliones (Tab. 2): About 320 samples, mainly recently determined faunistic material half from Austria, 70 series from Germany, 35 from South Tyrol, 12 from Romania and few of four other countries. The first record is from 1915, 21 series were sampled in the 1920s, but the largest amount after 1977 (179 series). Four of eight families recorded in Austria are represented in the collection, but only 23% of species expected in Austria have been found in Upper Austria; 18 more species have vouchers from other Austrian provinces and 11 species are only documented from other European countries.

Acari: Of the about 400 series, most of them undetermined, including relatively rich material of ticks. 116 taxa are identified and 105 of these bear statements on the sampling place. Most valuable are the 46 slides of Ryszard Haitlinger, including paratypes (details see below). Very probably, the material (30 slides) determined by the entomologist Hamann for his expertise (see above) is also included. Newer depositions of interest are from Kenya, Malawi, Mediterranean countries, Tanzania, Thailand and Zimbabwe. In spring 2005, the tropical rat mite *Ornithonyssus bacoti* (kindly determined by Birgit Habedank,

Family / Taxon	UA	AUT	Other countries	LIT
Sironidae	**–**	**1**	**–**	**1**
Siro duricorius	–	1 C	–	+
Cladonychiidae	**–**	**–**	**–**	**1**
Nemastomatidae	**3**	**5**	**6**	**12**
Carinostoma carinatum	–	1 C	1 ITA	+
Histricostoma dentipalpe	–	9 T	9 ITA	+
Mitostoma chrysomelas	–	1 St, 1 T	1 CHE, 4 DEU, 1 FRA, 1 ITA	+
Nemastoma lugubre	1	–	10 DEU, 1 FRA	+
Nemastoma triste	7	1 C, 2 T	–	+
Paranemastoma quadripunctatum	1	1 LA, 3 T	5 DEU, 1 FRA, 2 ITA	+
Paranemastoma silli	–	–	1 ROM	–/+
Trogulidae	**–**	**–**	**5**	**8**
Anelasmocephalus cambridgei	–	–	2 DEU, 1 FRA	+
Trogulus closanicus	–	–	5 DEU, 1 ROM	+
Trogulus martensi	–	–	1 CHE	–/+
Trogulus nepaeformis	–	–	1 DEU	+
Trogulus tricarinatus	–	–	3 DEU, 4 ITA	+
Ischyropsalididae	**2**	**–**	**2**	**5**
Ischyropsalis hellwigi hellwigi	1	–	1 DEU	+
Ischyropsalis kollari	2	–	–	+
Ischyropsalis manicata	–	–	1 ROM	–/+
Phalangiidae	**7**	**15**	**16**	**22**
Amilenus aurantiacus	–	2 LA, 6 T	1 ITA	+
Dasylobus graniferus	–	2 T	–	+
Dicranopalpus gasteinensis	1	3 T	2 ITA	+
Egaenus convexus	–	1 LA	2 ITA	+
Lacinius dentiger	–	1 T	1 DEU	+
Lacinius ephippiatus	–	–	4 DEU	+
Lacinius horridus	1	–	1 DEU, 1 FRA, 2 ITA, 2 ROM	+
Lophopilio palpinalis	–	6 T	4 DEU, 1 HRV, 1 ITA	+
Megabunus lesserti	1	–	–	+
Mitopus glacialis	–	2 T	–	+
Mitopus morio	–	4 T	2 DEU	+
Oligolophus tridens	2	1 T	4 DEU, 1 FRA, 1 ROM	+
Opilio canestrinii	1	1 St, 2 T	2 CHE	+
Opilio saxatilis	–	1 B, 1 LA	1 DEU, 1 GRC, 1 ITA, 1 ROM	+
Phalangium opilio	1	2 T	9 DEU, 3 ITA, 1 ROM	+
Platybunus bucephalus	–	1 S, 1 T	–	+
Platybunus pallidus	–	–	1 ROM	–/+
Platybunus pinetorum	–	8 T	2 DEU, 1 ITA	+
Rilaena triangularis	10	2 LA, 1 St, 10 T	6 DEU, 1 CHE, 1 FRA, 1 ROM	+
Zacheus crista	–	–	1 ROM	–/+
Sclerosomatidae	**2**	**6**	**5**	**11**
Astrobunus helleri	–	1 C, 3 T	2 ITA	+
Astrobunus laevipes	1	–	–	+
Gyas annulatus	–	–	2 ITA	+
Gyas titanus	–	1 St	–	+
Leiobunum blackwalli	–	–	1 DEU	–/+
Leiobunum limbatum	1	4 T	–	+
Leiobunum rotundum	–	1 T	1 DEU	+
Leiobunum rupestre	–	1 T	2 DEU	+
Nelima sempronii	–	7 T	–	+
Number of series: 255	**31**	**96**	**128**	**–**
Number of (sub)species: 45	**14**	**27**	**34**	**61**
Number of families: 6	**4**	**4**	**5**	**8**

Tab. 2. Summary of the databased OLML opilionid collection (25 July 2006). Numbers refer to taxa and voucher series, respectively. LIT = Austrian record in Blick & Komposch (2004; –/+ means not listed for Austria, but other countries of Central and Northern Europe); further abbreviations see chapter at the end of this paper.

Family / Taxon	UA	Diverse localities	LIT
Chthoniidae	**2**	**1**	**17**
Chthonius orthodactylus	–	1 C	+
Chthonius tenuis	1	–	+
Chthonius tetrachelatus	2	–	+
Neobisiidae	**6**	**9**	**24**
Microbisium dumicola	7	4 St	–
Neobisium carcinoides	169	2 C, 1 LA, 4 S, 4 St, 1 ITA	+
Neobisium carinthiacum	–	3 C	+
Neobisium fuscimanum	11	2 LA	+
Neobisium insulare	–	2 HRV	–
Neobisium noricum	–	1 S	+
Neobisium simoni petzi	2	–	+
Neobisium simoni simoni	35	–	+
Neobisium spelaeum	–	6 SVN	–
Neobisium sylvaticum	37	1 LA, 1 St, 1 ITA	+
Roncus lubricus lubricus	–	3 C	+
Syarinidae	**–**	**–**	**1**
Larcidae	**–**	**–**	**1**
Cheiridiidae	**1**	**–**	**2**
Cheiridium museorum	1	–	+
Geogarypidae	**–**	**–**	**1**
Withiidae	**–**	**–**	**2**
Cheliferidae	2	1	5
Chelifer cancroides	10	1 ITA	+
Dactylochelifer latreillei	5	–	+
Chernetidae	**4**	**2**	**15**
Allochernes wideri wideri	18	–	+
Chernes cimicoides	7	1 St	+
Chernes montigenus	–	1 ITA	+
Lamprochernes nodosus	1	–	+
Pselaphochernes scorpioides	1	–	+
Atemnidae	**–**	**–**	**1**
Number of series: 347	**307**	**40**	**–**
Number of (sub)species: 22	**16**	**13**	**69**
Number of families: 5	**5**	**4**	**10**

Tab. 3. Summary of the databased OLML pseudoscorpion collection (14 August 2006); subgenera omitted. *Neobisium blethnoides* of unknown taxonomic status and without sampling data is included in the number of taxa. Numbers refer to taxa and voucher series, respectively. LIT = recorded in Blick & al. (2004a); further abbreviations see chapter at the end of this paper.

Berlin; cp. also Habedank 2002) was recorded for the first time in a school in Leonding near Linz.

Pseudoscorpiones (Tab. 3): About 640 samples, to a great extent undetermined; 348 series of 23 species and subspecies identified by Max Beier; first records from 1901 and about 73% of determined samples were collected until 1910; of special interest are the types (details see below). Five of ten families recorded in Austria are represented in the collection, but only 23% of species expected in Austria have been found in Upper Austria and seven more species (some possibly invalid) in other locations.

Family	LIT spp.	PF spp.	UA spp.	Total spp.	Total rec.	UA rec.	AUT rec.	Other countries rec.
Agelenidae	14	11	5	9	19	7	3 T	4 DEU, 3 ROM, 2 YUG
Amaurobiidae	13	1	4	7	30	7	1 C, 10 T	4 DEU, 3 ITA, 5 ROM
Anyphaenidae	1	1	1	1	8	2	–	3 CZE, 3 DEU
Araneidae	50	26	16	37	215	46	6 B, 3 C, 7 LA, 3 S, 45 T, 2 V	1 BIH, 6 CHE, 6 CZE, 24 DEU, 5 FRA, 1 GEO, 3 GRC, 1 GTM, 12 HRV, 1 HUN, 40 ITA, 1 ROM, 1 SVN, 1 TUR
Clubionidae	26	15	9	16	66	13	1 St, 16 T	3 CZE, 26 DEU, 7 ROM
Corinnidae	5	1	1	3	17	2	1 T	5 DEU, 5 ITA, 4 ROM
Cybaeidae	4	3	–	4	8	–	4 W	4 ROM
Dictynidae	20	7	4	9	23	6	5 T	2 CZE, 5 DEU, 3 GRC, 1 ITA, 1 ROM
Dipluridae	–	–	–	1	1	–	–	1 GTM
Dysderidae	11	5	3	8	24	3	4 T	5 DEU, 4 ITA, 4 ROM, 3 SVN, 1 YUG
Gnaphosidae	81	28	7	50	187	12	1 LA, 30 T	1 CZE, 60 DEU, 6 GRC, 39 ITA, 38 ROM
Hahniidae	11	6	2	6	22	–	1 St, 4 T	1 CZE, 4 DEU, 5 ITA, 2 ROM
Linyphiidae	372	175	85	186	826	200	2 C, 3 S, 8 St, 80 T	6 CZE, 372 DEU, 8 GRC, 72 ITA, 75 ROM
Liocranidae	9	9	1	8	35	1	7 T	5 DEU, 19 ITA, 3 ROM
Lycosidae	78	47	20	60	442	40	3 C, 2 S, 110 T	2 CHE, 123 DEU, 3 GEO, 18 GRC, 1 HRV, 71 ITA, 1 POL, 67 ROM, 1 RUS
Mimetidae	4	1	1	2	5	2	1 T	1 GRC, 1 ITA
Miturgidae	10	–	1	3	6	1	–	3 DEU, 2 ROM
Nesticidae	3	1	1	2	3	2	–	1 IDN
Oxyopidae	1	1	–	2	5	1	–	4 GRC
Philodromidae	27	11	4	13	45	5	1 LA, 6 T	5 CZE, 13 DEU, 10 GRC, 3 ROM, 2 TUR
Pholcidae	4	1	1	1	3	1	2 LA	–
Pisauridae	3	2	2	3	27	10	1 LA, 1 T	1 CHE, 8 DEU, 3 GRC, 3 ROM
Salticidae	71	37	15	37	126	25	1 LA, 2 St, 27 T	8 CZE, 31 DEU, 11 GRC, 2 HRV, 12 ITA, 7 ROM

Family	LIT spp.	PF spp.	UA spp.	Total spp.	Total rec.	UA rec.	AUT rec.	Other countries rec.
Scytodidae	1	–	1	1	1	1	–	–
Segestriidae	2	2	1	2	4	2	1 St	1 DEU
Sparassidae	1	1	1	1	5	4	–	1 DEU
Tetragnathidae	17	14	10	12	97	33	1 LA, 7 T	1 CHE, 34 DEU, 11 ITA, 9 ROM, 1 YUG
Theraphosidae	–	–	–	24	47	–	–	1 BRA, 40 of unknown origin, 6 PRY
Theridiidae	69	36	15	38	119	31	1 St, 1 LA, 21 T	10 CZE, 46 DEU, 3 GRC, 1 ITA, 5 ROM
Thomisidae	47	27	15	27	129	36	1 St, 1 LA, 11 T	4 CZE, 47 DEU, 1 GRC, 1 HRV, 13 ITA, 14 ROM
Titanoecidae	3	–	–	1	1	–	–	1 ITA
Uloboridae	3	1	–	1	3	–	3 T	–
Zodariidae	4	2	1	2	2	1	–	1 ROM
Zoridae	6	3	1	3	16	3	3 T	9 DEU, 1 ROM
Zoropsidae	1	–	–	1	3	–	–	3 GRC
Number of families	40	31	26	35	–	–	–	–
Number of spp./rec.	984*	485*	226	581	2570	497	455	1613

Tab. 4. Summary of the determined databased OLML Araneae collection (25 July 2006). LIT = Austrian records in Blick & al. (2004b; –/+ means not listed for Austria, but other countries of Central and Northern Europe), PF = Upper Austrian records in Freudenthaler (2004), rec. = number of voucher series, spp. = number of species, * total includes families not represented in the OLML collection. Further abbreviations see chapter at the end of this paper

Araneae: The main focus of the collection is on Araneae, which make up more than 50% of the species and specimens (Tab. 1, 4). More than two thirds, i.e. the determined, of the about 3400 series are catalogued, including types of three species (details see below). Undetermined material is mainly from Lower and Upper Austria and the Mediterranean region. 26 of 31 families and 47% of species recorded in Upper Austria are represented in the collection; altogether compared to the diversity expected in Austria (Tab. 4), this province is poorly investigated (cp. Freudenthaler 2004). However, the species number in the collection is doubled by vouchers from other, mainly European countries.

Since 2004 new records for Upper Austria are *Erigone remota*, *Euophrys lanigera*, *Singa nitidula* and a single specimen of *Cheiracanthium mildei* from a balcony in Linz, suspected to be involved in a medically treated bite on a human ankle in 2005. During a yellow sac spider hystery from June to August 2006, no further specimen was found under the suspected more than two dozen individuals presented.

I would like to draw attention to valuable voucher material of the following faunistic surveys: Steinberger & Thaler (1994) deposited 221 series, which were caught mainly with pitfall traps and arboreal photo-eclectors in two intensively cultivated areas in Upper Austria (Enns, Bachmanning) from March until October 1990. The publication details an unpublished report for the department of waste processing of the Upper Austrian provincial government (Thaler & Meyer 1994). Knoflach & Bertandi (1993) and Knoflach & Thaler (1994) studied ground-spiders of a pine forest growing on the rock-slip area at the entrance of Ötztal-valley, from which 83 and 169 lots, respectively, were deposited later. 45 lots from the Patscherkofel (North Tyrol) and 59 lots from Brixen (Italy, South Tyrol) of unpublished diploma theses of Trenkwalder (1997) and Ebenbichler (1998; partially in Rief & al. 2001), respectively, are also remarkable. Weiss & al. (1998a) investigated by pitfall trapping (1995–1997) ground-living spiders (94 series) of the Babina and Cernovca (Danube Delta Biosphere Reserve, Romania) polders after the reestablishment of a near-natural hydrological regime by dam openings. Kubcová & Buchar (2005) studied spiders on the branches of oak trees *Quercus pubescens* in Komárek forest steppe, Karlštejn, Bohemian Karst and donated 68 lots to OLML.

Several species deposited in OLML are treated in Noflatscher (1988, 1991, 1993), Weiss & Schneider (1996), Weiss & Rusdea (1998), Weiss & al. (1998a, b), Thaler & al. (2000), Buchar & Thaler (1998, 2002), Rief & al. (2001), Thaler & Knoflach (2002), Muster & Thaler (2004). In some cases the deposition was not yet mentioned in the publication.

Two dozen specimens of diverse theraphosid species, obtained from a breeder in Kremsmünster (Upper Austria) are worth mentioning, because they have been considerably well preserved by freeze-drying and are thus particularly suitable for exhibitions.

Catalogue of the arachnid type specimens

The OLML holds type material of 15 arachnid taxa, including three holotypes and syntypes of two species. It belongs to three arachnid orders: Pseudoscorpiones (four taxa), Acari (eight species) and Araneae (three species). Compared to the list in Aescht (2003a), type material of two further pseudoscorpion and three acari species could be located, and since that time *Philodromus lunatus* was donated. Each entry contains the following items:

Heading: Order and family

Original status (O): Original name of the taxon, name(s) of the first describer(s).

Description (D): Reference to the original publication, with the first page number of the original description and relevant figure numbers.

Citation (C): A citation of all information the author(s) give(s) in the original publication referring to the type material, e.g. type locality, number of specimens available, sex and status of these specimens as holo- or paratypes.

Inventory number (I) of OLML and kind of conservation.

Note (N): Current category of the type if differing from original publication and additional information, e.g. classification of type host, deposition of further type material (if not stated in C).

Pseudoscorpiones: Neobisiidae

O: *Neobisium* (*Neobisium*) *carinthiacum* Beier, 1939
D: Jb. Verein. Landeskd. Heimatpfl. Gau Oberdonau 88: 309, fig. 4.
C: "Typen: 4 adult, 6 juv., Hochobir, Kärnten, 5. VIII. 1924, Petz, leg. Nr. 6245. Paratypen: 2 adult, 1 juv., Eisenkappel, Kärnten, 4. VIII. 1924, Petz leg. Nr. 6239."
I: ALT/7375/13 (3 specimens), ALT/7375/15 (4 specimens) (all in alcohol).
N: Syntypes and two type localities in Carinthia (Austria) according to articles 73.2 and 76.1 of the ICZN (1999), respectively. No type status is ascribed to the juveniles (ALT/7375/16).

Fig. 1. Secondary types of *Neobisium* (*Neobisium*) *simoni petzi* Beier, 1939.

O: *Neobisium* (*Neobisium*) *noricum* Beier, 1939
D: Jb. Verein. Landeskd. Heimatpfl. Gau Oberdonau 88: 310, fig. 5.
C: "Type: 1 ♂, Untere Pfandlscharte (ca. 2300 m), Hohe Tauern, Gesiebe, 5. VIII. 1925, Petz leg. Nr. 6442."
I: ALT/7375/17 (alcolhol).
N: Holotype according to article 73.1 of the ICZN (1999). The type locality (Lower Pfandlscharte) is situated in the Austrian province of Salzburg.

O: *Neobisium* (*Blothrus*) *insulare* Beier, 1939
D: Jb. Verein. Landeskd. Heimatpfl. Gau Oberdonau 88: 311, fig. 6.
C: "Typen: 2 adult (♂, ♀), 1 juv., aus einer Höhle auf der Insel Veglia (Krk)."
I: ALT/810/53 (1 ♂), ALT/810/54 (1 ♀) (both dry).
N: Syntypes according to article 73.2 of the ICZN (1999). The type locality is situated in Croatia. No type status is ascribed to the juvenile, which seems to be lost.

O: *Neobisium* (*Neobisium*) *simoni petzi* Beier, 1939 (Fig. 1)
D: Jb. Verein. Landeskd. Heimatpfl. Gau Oberdonau 88: 306, fig. 2C, D.
C: "Als Typus der neuen Unterart betrachte ich das mir vorliegende Tier vom Sengsengebirge über den Feichtauer-Seen, 27. VI. 1926, B. Scholz Sen. leg.

(Fig. [sic] 2D), als Paratypen die Exemplare von der Hohen Nock, 29. VIII. 1905, Petz leg. Nr. 3375 (Bild [sic] 2C)."

I: ALT/7375/14 (1 holotype, alcohol), ALT/810/254 (2 paratypes, dry).

N: Both type localities are situated in Upper Austria.

Acari: Canestriniidae

O: *Albinorattia igori* HAITLINGER, 1989

D: Wiadomosci Parazytologiczne 35: 588, fig. 8–14.

C: "Batjan Island, Indonesia, holotype male, 5 ♀ paratypes from *Ischiopsopha olivacea* TH. (Scarabaeidae, Cetoninae); other specimens: ...; IZ PAS."

I: 1996/61 ("paratypes ♂, ♀, n/Indonesia, Batjan Isl. from *Ischiopsopha olivacea* TH.; Cetoninae"; slide MP94_27).

N: Type host classified in Coleoptera: Cetoniidae. Type species of the genus *Albinorattia* HAITLINGER, 1989 (p. 587). Status of male specimen on slide unclear.

O: *Arrunsithiana battosi* HAITLINGER, 1992

D: Wiadomosci Parazytologiczne 37: 396, fig. 33–34.

C: "Holotype male, paratypes 2 ♀ from *Stolas pleurosticha* (ER.), Bolivia, Coroica; ... MNHWU; ... 2 ♂, 2 ♀ from *Stolas funebris* (BOH.), Peru, Rio Mixiollo; ... in author's collection."

I: 1996/69 ("paratypes Peru, Rio Mixiollo, 7. 8. 1990 ♂, ♀/from *Stolas funebris* Cassidinae"; slide MP94_35).

N: Type host classified in Coleoptera: Chrysomelidae; a vernacular name of the subfamily Cassidinae is "tortoise beetles". Secondary types with 15 different localities.

O: *Grandiellina tacjannae* HAITLINGER, 1991

D: Wiadomosci Parazytologiczne 37: 383, fig. 1–5.

C: "Holotype male, paratypes 2 ♂, 4 ♀ from *Botanochara impressa* (PANZ.), Brazil, Candido de Abreu, MNHWU; ... 1 ♂ from *Botanochara sanguinea* (SP.), Paraguay; ... all in author's collection."

I: 1996/68 ("paratypes/Paraguay/from *Botanochara sanguinea*; Cassidinae"; slide MP94_34).

N: Type host classified in Coleoptera: Chrysomelidae. Secondary types with 13 different localities.

O: *Photia hermengildae* HAITLINGER, 1988b
D: Wiadomosci Parazytologiczne 34: 319, fig. 1–6.
C: "Huta Szklana, Góry Swietokrzyskie (voivodeship Kielce) 27 July 1983, holotype female, 28 paratypes females, 10 males and 16 nymphs, Babia Góra (voi. Bielsko) 12 November 1982, ... All specimens collected from *Carabus linnaei* — in author's collection."
I: 1996/63 ("paratypes ♂, ♀, n/Poland, Babia Góra PHs 12. 10. 1982, from *Carabus linnaei*"; slide MP94_29).
N: Type host classified in Coleoptera: Carabidae. Secondary types with 3 different localities.

Acari: Heterocoptidae

O: *Erotylocoptes helenae* HAITLINGER, 1996
D: Linzer biologische Beiträge 28: 980, fig. 1–8, 13–16.
C: "holotype male. Republic of South Africa, ?Radburg, from *Laccoptera rugosicollis* (SPAETH) (Cassidinae), MNHWU; paratypes: 1 ♀, the same data as holotype, 1 ♀, Natal, 23. 10. 1897 from *L. corrugata* (SAHLBERG) in authors collection, 1 ♀, Mozambique, from *L. rugosicollis*; UAM."
I: 1996/33, paratype (slide MP94_16).
N: Type host classified in Coleoptera: Chrysomelidae. Secondary types with 2 different localities.

O: *Erotylocoptes verenae* HAITLINGER, 1996
D: Linzer biologische Beiträge 28: 982, fig. 9–12, 25–34.
C: "holotype male, Congo Brazzaville, from *Laccoptera caduca* BOROWIEC; MNHWU; paratypes: 4 ♂ the same data; 2 ♂, 2 ♀ deposited in UAM."
I: 1996/32, paratypes (slide MP94_15).
N: Type host classified in Coleoptera: Chrysomelidae.

O: *Heterocoptes nolae* HAITLINGER, 1996
D: Linzer biologische Beiträge 28: 983, fig. 35–42.
C: "holotype male, Andaman Island, from *Aspidomorpha inquinata* BOH; MNHWU, 4 ♂, 1 ♀ paratypes, the same data as in holotype; 3 ♂ paratypes in UAM."
I: 1996/34, paratypes (slide MP94_17).
N: Type status not indicated on slide, but according to publication; type host classified in Coleoptera: Chrysomelidae.

Acari: Pterygosomidae

O: *Geckobia mananjaryensis* HAITLINGER, 1988a
D: Wiadomosci Parazytologiczne 34: 167, fig. 21–31.
C: "Mananjary, east Madagascar, 20 March 1986, holotype female, 12 females paratypes, four nymphs and two larvae; ... occurring on *Phelsuma lineata* (det. dr [sic] R. Bielawski); all specimens collected under axillae the foreleg. The mites are deposited in the author's collection)."
I: 1996/70, paratypes ("Mananjary, Madagascar 20. 03. 1986/from *Phelsuma lineata* (gecko)"; slide MP94_36).
N: Type host classified in Reptilia: Sauria: Gekkonidae.

Araneae: Linyphiidae

O: *Micrargus alpinus* RELYS & WEISS, 1997
D: Revue Suisse de Zoologie 104: 492, fig. 1, 5–6, 7–10, 11, 15, 19.
C: "Bodenfallen, 1993–1994, leg. Relys, Ost-Alpen, Hohe Tauern, Gasteiner Tal, Nassfeld-Alm, 1620–1665 m NN, Zwergstrauchbestände. Holotypus: 1 ♂. Paratypen: 2 ♂, 1 ♀ (Muséum d'histoire naturelle Genève; ursprünglich als Typenmaterial vorgesehene 5 ♂, 5 ♀ sind beim Postversand verlorengegangen); 6 ♂, 5 ♀ (Biologiezentrum des OÖ Landesmuseums Linz-Dornach); 2 ♂, 1 ♀ (Naturhistorisches Museum Wien)."
I: 1996/77/241 (alcohol).
N: The whereabout of the holotype is inexplicit; further paratypes are in MHNG and NMW. The type locality is situated in the Austrian province of Salzburg.

Araneae: Lycosidae

O: *Pardosa aquila* BUCHAR & THALER, 1998
D: Linzer biologische Beiträge 30: 707, fig. 1–3, 7 (♂♀).
C: "Russia, Dagestan: Kurusch, ascent to Schalbusdag 2500–3500 m, 1 ♂ holotype NMW, 1 ♂ 4 ♀ NMW 9. July 1989, leg. Th.; 3 ♂, 4 ♀ BZL, ZMM, MHNG 9. July 1989, leg. Stockner; upper limit of grassland 3500 m, 2 ♀ NMW 10. July 1989, leg. Th. – Additional specimens to the holotype have been labelled as paratypes."
I: 1999/106 (alcohol).
N: See also the type catalogue of Růžička & al. (2005).

O: *Philodromus lunatus* MUSTER & THALER, 2004
D: Denisia 12: 319, fig. 4, 6, 19, 26, 27.
C: "Holotype: ♂, Greece. Corfu: Spartilas 350 m, 29. 5. 1996, leg. Knoflach & Thaler (LI). Paratypes: 7 ♂, 4 ♀ together with holotype. Spartilas 650 m, 3 ♂, 2 ♀, 31. 5. 1996, leg. Knoflach & Thaler. Spartilas 600 m, 2 ♂, 1 ♀, 4. 6. 1997, leg. Heiss. Sgombou 100 m, 4 ♂, 6 ♀, Phrygana beating, 28. 5. 1996, leg. Knoflach & Thaler. Depository of paratypes: LI, MHNG, MTD, NMW, SMF, CM, CTh."
I: 2005/43/2 (1 ♂ holotype, 1 ♀ paratype; 1 juvenile) (all in alcohol).
N: No type status is ascribed to the juvenile.

Publication activities of the OLML concerning arachnids

The Biology Centre of the Upper Austrian Museums publishes five journals, viz. "Linzer biologische Beiträge" (LBB; founded under another title in 1969), "Stapfia" (founded in 1977), "Beiträge zur Naturkunde Oberösterreichs" (BNO) and "Vogelkundlichen Nachrichten aus Oberösterreich – Naturschutz aktuell" (VNO; both founded in 1993), and "Denisia" (founded in 2001). Except VNO, the other four journals and a general information periodical, the "OÖ. Museumsj.", include 81 papers on arachnids, referring to the faunistics of Upper Austria or general topics (for abstracts see www.biologiezentrum.at). Important contributions are assembled in two exhibition catalogues (Denisia 6 and 12), one edited by Horst Aspöck in 2002 on "Amöben, Bandwürmer, Zecken... Parasiten und parasitäre Erkrankungen des Menschen in Mitteleuropa" (Amoebae, tapeworms, ticks... Parasites and parasitic diseases of humans in central Europe) and the other by Konrad Thaler in 2004 on "Diversität und Biologie von Webspinnen, Skorpionen und anderen Spinnentieren" (Diversity and biology of spiders, scorpions and other arachnids). Worth noting is also the contribution of Knoflach & Thaler (1998) to a first exhibition catalogue on neozoans.

Seven different orders are concerned: Acari are treated in 12 papers (Haitlinger 1994, 1995, 1996, Schuster 1997, Preleuthner & al. 1999, Habedank 2002, Kampen 2002, Stanek 2002, Ebermann 2004, Schatz 2004, Bartsch 2006a, b), Araneae in 37 (Ricek 1982, Freudenthaler 1989, 1999, 2004, Seidl 1993, Steinberger & Thaler 1994, Weiss 1996, 1998a, b, Weiss & al. 1998, Roth 1999, Thaler 1997, 1999, Buchar & Thaler 1995, 1998, 2002, 2004, Deschka 2000, Knoflach & Thaler 1998, 2004a, b, Thaler & Knoflach 2002,

Fig. 2. Model of the small money spider *Walckenaeria acuminata*, prepared by Julia Stoess (Hamburg) on a scale of 100:1. The model is firmly installed on an imitation stone. Total dimensions: approx. 82 cm long, 70 cm wide, 30 cm high.

2003, Thaler & al. 2000, 2004, Breuss 2004, Knoflach 2004, Knoflach & Pfaller 2004, Kronestedt 2004, Kropf 2004, Kubcová 2004, Muster & Thaler 2004, Schikora 2004, Steinberger 2004, Aescht 2004c, d, Kubcová & Buchar 2005), Opiliones in three (Weiss 1996, Mitov 2002, Komposch & Gruber 2004), Palpigradi in one (Christian 2004a), Pseudoscorpiones in two (Mahnert 2004, Christian 2004b), Pycnogonida (Pantopoda) in six (Bamber 2006a–f) and Scorpiones in two (Amr & Abu Baker 2004, Komposch 2004). More than one order is referred to in 13 papers (Thaler & Knoflach 1995, Freudenthaler 1999, Aspöck 2002, Aspöck & al. 2002a, b, Aspöck & Walochnik 2002, Walochnik & Aescht 2002, Walochnik & Aspöck 2002, Mittermayer & Haditsch 2002, Alberti & Michalik 2004, Barth 2004, Paulus 2004, Aspöck 2005).

Some observations on single acari and spider species are hidden in five papers (Weissmair & Hauser 1993, Hauser & al. 1996, Ressl 1998, Vöth 1999, Deschka & Wimmer 2000). Historical aspects of arachnology (Aescht 2003b, Schaller 2003, Thaler & Gruber 2003, Oswald & Makarkin 2004), first records for Upper Austria (Aescht & al. 2003) and bibliographies (Gusenleitner & Aescht 2003a, b) are also covered. Six small articles announce events and/or exhibitions in the museum (Aescht 2002, 2004a, b, 2005, Pfosser & al. 2004).

Notes on a spider exhibition

Generously supported by Konrad Thaler and Barbara Thaler-Knoflach, an exhibition was organised on about 155 m^2 in the Biology Centre from 2nd April to 3rd October 2004. It consisted of 23 panels giving basic informations, a model of the small money spider *Walckenaeria acuminata* (Family Linyphiidae, subfamily Erigoninae; Fig. 2), prepared by Julia Stoess (Hamburg), and about 20 living specimens of diverse arachnid orders, placed at our disposal by Erich Starlinger (Aistersheim near Wels). Diverse models and objects also referred to cultural and comparative aspects.

Seven scientific, though popularising lectures (Konrad Thaler, Barbara Thaler-Knoflach, Peter Freudenthaler [3 x], Heinrich Schatz, Christian Komposch) and communication programs for all ages, lasting one to one and a half hours, prepared and continuously performed by five trained persons, accompanied the presentation. Didactic material for children was also kindly provided by Urte Paulus (University Vienna).

The press was highly interested in this exhibition, leading to announcements in most of the Upper Austrian newspapers and in radio and television programs. Concerning the interests of the press, we can confirm the experiences of Koomen (1991), viz. that it was disappointing that most questions were about humans instead of spiders. However, mistakes easily made by the press (cp. Koomen 1991) could largely be avoided by a restricted package of pictures with detailed texts.

Under the title "Spinnen: unheimlich und schön" (spiders: weird and beautiful; Fig. 3), about 19.700 visitors were attracted, establishing a record for our house. Most of the 306 remarks written down in the visitor's book, were only positive. As a matter of course, people with a pronounced arachnophobia did not visit the exhibition.

A questionnaire from America (www.questacon.net/html/assets/pdf/Spiderphobia_activity.pdf), introduced by Misses Himmelbauer, a teacher of the International School in Linz-Auhof, was displayed during the exhibition. 16 of the 30 questions available were translated into German and answered by 478 people. As expected (see above) only one third of the visitors (with a peak between 10 and 19 years) is rather afraid of spiders; the sex ratio is not representative, since only 4% declared a male, 14.4% a female, but 14.9% no gender. Ambivalent thinking seems to prevail as shown by quite contradicting statements referring to the 16 questions:

Fig. 3. Posted bill of the exhibition "spiders: weird and beautiful" in 2004.

Fig. 4. Model of a tick nymph, made by Johannes Rauch.

11.1% avoid going to parks or on camping trips because there may be spiders about.
7.6% would feel some anxiety holding a toy spider in their hand.
22.8% dislike looking at pictures of spiders in a magazine.
58.7% cannot go to sleep unless someone kills a spider on the ceiling over the bed.
33.8% feel tense and restless, when they see a spider.
56.1% enjoy reading articles about spiders.
8.8% feel sick when they see a spider.
89.9% think that spiders are sometimes useful.
19.8% shudder when they think of spiders.
70.3% think that some spiders are very attractive to look at.
26.0% think that the way spiders move is repulsive.
52.4% do not mind to touch a dead spider.
19.1% would probably run, if they came upon a spider while cleaning.
19.4% are more afraid of spiders than of any other animal.
56.8% have no fear of non-poisonous spiders.
87.9% think that spider webs are very artistic.

Due to time restrictions of the guided tours, it could not be differentiated between the level of fear before and after visiting the exhibition, viz. the learning and reduction effect. Several visitors were disappointed to see that some of the living specimens were usually hiding, not very agile and could not be touched. We agree with Koomen (1991) that although (or perhaps: because) many people are more or less afraid of spiders, these animals have the image of being "sensational" and visitors have quite high expectations, particularly concerning live specimens. Thus, it is difficult to balance a spectacular exhibit with the goals each educational spider exhibition has: to teach the public what spiders are, and what they are doing as well as to promote a broader acceptance of this fascinating, but often "feared" group of animals.

As a loan for special exhibitions we can offer, beside the model of *Walckenaeria*, a model of a tick nymph (Fig. 4), made on the occasion of the exhibition on parasites in 2002 by Johannes Rauch, talented self-educated person and co-worker in our exhibition's team. Moreover, freeze-dried scorpions and members of the family Theraphosidae and "handy" whole-embedded (in epoxy resin) specimens of a pseudoscorpion, two bird spiders and two wasp spiders (*Argiope*) are available.

Note added to proof:
An important collection of alcohol material was deposited by Mag. Dr. Peter Freudenthaler (born on 10. 5. 1955 in Linz) in July 2008. It comprises about 550 collecting vessels including thousands of lots with a geographical focus on Upper Austria (see references above and Freudenthaler 1994a, b; 2000); further unpublished records are from Croatia (Dalmatia, Istria), France (Corsica), Greece (Samos, Skiathos), Ireland (Lough Cloonadoon, Lough Gill), and Italy (Apulia, South Tyrol, Tuscany). Beside spiders, bycatches of undetermined harvestman, pseudoscorpion, myriapod and insect taxa are included. About 514 issues of 9 arachnological journals and nearly 400 scientific reprints are also worth to be mentioned. Although 4288 records based on the publications of Peter Freudenthaler have already been embraced in our relational database ZOBODAT, the precise inventory of vouchers is still under way. In any case, the Biology Centre of the Upper Austrian Museums in Linz is a unique training possibility for beginners to become familiar with arachnids.

Abbreviations

Except the Austrian provinces, abbreviations of localities, refer to the three character country code (= ISO 3166), which is a three-part geographic coding standard for coding the names of countries and dependent areas, and the principal subdivisions thereof.

AUT	Austria
B	Burgenland
BIH	Bosnia and Herzegovina
BRA	Brazil
BZL	see OLML
C	Carinthia
CHE	Switzerland
CM	C. Muster
CTh	K. Thaler & B. Knoflach
CZE	Czech Republic
DEU	Germany
EGY	Egypt
FRA	France
GEO	Georgia
GRC	Greece
GTM	Guatemala
HRV	Croatia
HUN	Hungary
IDN	Indonesia
ITA	Italy
IZ PAS	Institute of Zoology, Polish Academy of Science, Warsaw
LA	Lower Austria
LI	see OLML
MHNG	Muséum d'Histoire naturelle Genève
MNHWU	Museum of Natural History, Wroclaw University
MTD	Museum für Tierkunde Dresden
NMW	Naturhistorisches Museum Wien
OLML	Biologiezentrum Linz/Oberösterreichisches Landesmuseum (Austria) according to http://hbs.bishopmuseum.org/codens/codens-inst.html; also abbreviated as LI, BZL, UAM.
POL	Poland
PRY	Paraguay
ROM	Romania

RUS	Russian Federation
S	Salzburg
SMF	Forschungsinstitut Senckenberg, Frankfurt a. M.
St	Styria
SVN	Slovenia
T	Tyrol
TUR	Turkey
UA	Upper Austria
UAM	see OLML
V	Vorarlberg
W	Vienna
YUG	Serbia and Montenegro
ZMM	Zoological Museum of the Moscow State University

References

Aescht, E. (1994): Die Erforschung der Urtiere (Protozoen) in Österreich. — Kataloge des Oberösterreichischen Landesmuseums, Neue Folge 71: 7–79.

Aescht, E. (2002): Amöben, Bandwürmer, Zecken... Parasiten und parasitäre Erkrankungen des Menschen in Mitteleuropa. — Oberösterreichisches Museums-Journal 10/12: 2.

Aescht, E. (2003a): Typen-Liste der Sammlung "Wirbellose Tiere" (ohne Insekten) am Biologiezentrum Linz. — Beiträge zur Naturkunde Oberösterreichs 12: 377–406.

Aescht, E. (2003b): Zur Geschichte der Sammlung "Wirbellose Tiere" (ohne Insekten) am Biologiezentrum Linz. — Beiträge zur Naturkunde Oberösterreichs 12: 51–88.

Aescht, E. (2004a): Spinnen – unheimlich und schön. — Oberösterreichisches Museums-Journal 03-2004: 5.

Aescht, E. (2004b): "Spinnen" in Linz. Ausstellung im Biologiezentrum vom 2. April bis 3. Oktober 2004. — Oberösterreichisches Museums-Journal 04-2004: 5.

Aescht, E. (2004c): Tier des Monats. Die "grosse" Zwergspinne *Walckenaeria acuminata*. — Oberösterreichisches Museums-Journal 04-2004: 5.

Aescht, E. (2004d): Tier des Monats. Die Wespenspinne *Argiope bruennichi*. — Oberösterreichisches Museums-Journal 08-2004: 5.

Aescht, E. (2005): Besucherrekord bei Spinnenausstellung. — Oberösterreichisches Museums-Journal 01-2005: 5.

Aescht, E., Gusenleitner, F. & Aubrecht, G. (2003): Zoologische Erstnachweise für Oberösterreich (1993–2002). — Beiträge zur Naturkunde Oberösterreichs 12: 347–376.

Alberti, G. & Michalik, P. (2004): Feinstrukturelle Aspekte der Fortpflanzungssysteme von Spinnentieren (Arachnida). — Denisia 12: 1–62.

Amr, Z.S. & Abu Baker, M. (2004): The scorpions of Jordan. — Denisia 14: 237–244.

Aspöck, H. (Sci. ed., 2002): Amöben, Bandwürmer, Zecken... Parasiten und parasitäre Erkrankungen des Menschen in Mitteleuropa. — Denisia 6: 600 pp.

Aspöck, H. (2002): Zecken, Insekten und andere Gliederfüsser als Erreger und Überträger von Krankheiten. — Denisia 6: 397–445.

Aspöck, H. (2005): Insekten und Zecken als Überträger von Infektionen des Menschen in Mitteleuropa. — Linzer biologische Beiträge 37: 21–28.

Aspöck, H. & Walochnik, J. (2002): Was sind Parasiten? — Denisia 6: 1–12.

Aspöck, H., Auer, H. & Walochnik, J. (2002a): Parasitenzyklen – Die (manchmal) verschlungenen Wege von Wirt zu Wirt. — Denisia 6: 13–32.

Aspöck, H., Auer, H. & Walochnik, J. (2002b): Parasiten und parasitäre Erkrankungen des Menschen in Mitteleuropa im Überblick. — Denisia 6: 33–74.

Bamber, R. (2006a): *Ammothea verenae* Child, 1987 [Pycnogonida, Ammotheidae]. — Denisia 18: 301.

Bamber, R. (2006b): *Sericosura cochleifovea* Child, 1989 [Pycnogonida, Ammotheidae]. — Denisia 18: 302.

Bamber, R. (2006c): *Sericosura cyrtoma* Child & Segonzac, 1996 [Pycnogonida, Ammotheidae]. — Denisia 18: 303.

Bamber, R. (2006d): *Sericosura heteroscela* Child & Segonzac, 1996 [Pycnogonida, Ammotheidae]. — Denisia 18: 304.

Bamber, R. (2006e): *Sericosura mitrata* (Gordon, 1944) [Pycnogonida, Ammotheidae]. — Denisia 18: 305.

Bamber, R. (2006f): *Sericosura venticola* Child, 1987 [Pycnogonida, Ammotheidae]. — Denisia 18: 306.

Barth, F.G. (2004): Spinnen – Sinne. — Denisia 12: 63–92.

Bartsch, I. (2006a): *Copidognathus papillatus* Krantz, 1982 [Acariformes, Halacaridae]. — Denisia 18: 299.

Bartsch, I. (2006b): *Halacarellus auzendei* (Bartsch, 1990) [Acariformes, Halacaridae]. — Denisia 18: 300.

Beier, M. (1939): Die Pseudoscorpione des Oberösterreichischen Landesmuseums in Linz. — Jahrbuch des Vereines für Landeskunde und Heimatpflege im Gau Oberdonau 88: 305–312.

Blick, T. & Komposch, Ch. (2004): Checkliste der Weberknechte Mittel- und Nordeuropas. Version 27. Dezember 2004. — Internet: http://www.AraGes.de/checklist.htm#2004_Opiliones.

Blick, T., Muster, Ch. & Duchác, V. (2004a): Checkliste der Pseudoskorpione Mitteleuropas. Version 1. Oktober 2004. — Internet: http://www.AraGes.de/checklist.html#2004_Pseudoscorpiones.

Blick, T., Bosmans, R., Buchar, J., Gajdoš, P., Hänggi, A., Van Helsdingen, P., Růžička, V., Starega, W. & Thaler, K. (2004b): Checkliste der Spinnen Mitteleuropas. Version 1. Dezember 2004. — Internet: http://www.arages.de/checklist.htm#2004_Araneae.

Breuss, W. (2004): Eine Ausbeute von Spinnen (Arachnida: Araneae) von Franz-Josef-Land (Russland). — Denisia 12: 535–545.

Buchar, J. & Thaler, K. (1995): Zur Variation der Kopulationsorgane von *Pistius truncatus* (Pallas) (Araneida, Thomisidae) in Mitteleuropa. — Linzer biologische Beiträge 27: 653–663.

Buchar, J. & Thaler, K. (1998): Lycosidae from the high alpine zone of the Caucasus range, with comparative remarks on the fauna of the Alps (Arachnida: Araneae). — Linzer biologische Beiträge 30: 705–717.

Buchar, J. & Thaler, K. (2002): Über *Pardosa atomaria* (C.L. Koch) und andere *Pardosa*-Arten an Geröllufern in Süd- und Mitteleuropa (Araneae, Lycosidae). — Linzer biologische Beiträge 34: 445–465.

Buchar, J. & Thaler, K. (2004): Ein Artproblem bei Wolfspinnen: Zur Differenzierung und vikarianten Verbreitung von *Alopecosa striatipes* (C.L. Koch) und *A. mariae* (Dahl) (Araneae, Lycosidae). — Denisia 12: 271–280.

Christian, E. (2004a): Palpigraden (Tasterläufer) – Spinnentiere in einer Welt ohne Licht. — Denisia 12: 473–483.

Christian, E. (2004b): Österreichische Höhlenentomologie im zwanzigsten Jahrhundert. — Denisia 13: 351–357.

Deschka, G. (2000): Die Springspinne *Philaeus chrysops* in Oberösterreich (Arachnida: Salticidae). — Beiträge zur Naturkunde Oberösterreichs 9: 187–190.

Deschka, G. & Wimmer, J. (2000): Die Schmetterlingsfauna der Kreuzmauer (Insecta: Lepidoptera). — Beiträge zur Naturkunde Oberösterreichs 9: 65–186.

Ebenbichler, G. (1998): Die epigäischen Spinnen des Patscherkofel bei Innsbruck (Waldgrenze und alpine Stufe). — Diplom-Arbeit Universität Innsbruck: 102 pp.

Ebermann, E. (2004): Tragewirt-Gemeinschaften (Phoresie) bei Spinnentieren (Arachnida). — Denisia 12: 93–110.

Freudenthaler, P. (1989): Ein Beitrag zur Kenntnis der Spinnenfauna Oberösterrreichs: Epigäische Spinnen an Hochmoorstandorten bei St. Oswald im Österreichischen Granit- und Gneishochland (Arachnida: Aranei). — Linzer biologische Beiträge 21: 543–575.

Freudenthaler, P. (1994a): Epigäische Spinnen und Weberknechte an zwei Standorten im Bereich der "Linzer Pforte", Oberösterreich (Arachnida: Aranei; Opiliones). — Naturkundliches Jahrbuch der Stadt Linz 37–39 (1991–1993): 379–392.

Freudenthaler, P. (1994b): Bodenbewohnende Spinnen und Weberknechte aus der Pleschinger Sandgrube bei Linz; Oberösterreich (Arachnida: Aranei, Opiliones). — Naturkundliches Jahrbuch der Stadt Linz 37–39 (1991–1993): 393–427.

Freudenthaler, P. (1999): Epigäische Spinnen und Weberknechte zweier Blockschutt-Habitate im Ranna-Tal, Oberösterreich (Arachnida: Araneae, Opiliones). — Beiträge zur Naturkunde Oberösterreichs 7: 143–152.

Freudenthaler, P. (2000): Spinnen. — In: Hauser, E., Essl, F., Freudenthaler, P., Mitter, H. & Ressl, F.: Staninger Leiten 2000. Bericht für die Naturschutzabteilung des Amtes der Oberösterreichischen Landesregierung: 15–19, 40–50.

Freudenthaler, P. (2002): Ein Beitrag zur Kenntnis der Spinnenfauna Oberösterreichs: Epigäische Spinnen und Weberknechte naturnaher Standorte im Mühlviertel und ein erstes Verzeichnis der Spinnen Oberösterreichs. — Dissertation Universität Innsbruck: 350 pp.

Freudenthaler, P. (2004): Erstes Verzeichnis der Spinnen Oberösterreichs. — Denisia 12: 381–418.

Gusenleitner, F. & Aescht, E. (2003a): Neu beschriebene Taxa in den Publikationen des Biologiezentrums Linz (1993–2002). — Beiträge zur Naturkunde Oberösterreichs 12: 299–345.

Gusenleitner, F. & Aescht, E. (2003b): Bibliographie der Wirbellosen Tiere (Evertebrata) Oberösterreichs (1991–2002). — Beiträge zur Naturkunde Oberösterreichs 12: 521–618.

Habedank, B. (2002): Die Tropische Rattenmilbe *Ornithonyssus bacoti* und andere Raubmilben – seltene Parasiten des Menschen in Mitteleuropa. — Denisia 6: 447–460.

Haitlinger, R. (1988a): Species of *Geckobia* MEGNIN, 1878 (Acari, Prostigmata, Pterygosomidae) from Madagascar and Vietnam. — Wiadomosci Parazytologiczne 34: 161–175.

Haitlinger, R. (1988b): Two new species *Photia* genus OUDEMANS, 1904 (Acari, Astigmata, Canestriniidae) from Poland. — Wiadomosci Parazytologiczne 34: 319–328.

Haitlinger, R. (1989): New canestriniid mites (Acari, Astigmata, Canestriniidae) associated with Scarabaeidae and Cerambycidae (Insecta, Coleoptera) from the Indo-Australian region. — Wiadomosci Parazytologiczne 35: 585–601.

Haitlinger, R. (1991): Canestriniid mites (Acari, Astigmata, Canestriniidae) occurring on Chrysomelidae (Insecta, Coleoptera) in neotropical region. I. Genera *Grandiellina* FAIN, *Arrunsithiana* n. gen. — Wiadomosci Parazytologiczne 37: 381–399.

Haitlinger, R. (1994): Two new species of the genus *Podothrombium* BERLESE, 1910 (Acari, Prostigmata, Trombidiidae) from Austria and Italy. — Linzer biologische Beiträge 26: 531–538.

Haitlinger, R. (1995): New mites (Acari, Astigmata: Canestriniidae; Prostigmata: Erythraeidae, Trombidiidae, Microstrombidiidae) for the fauna of Austria, German and Hercegovina with descriptions of four new species. — Linzer biologische Beiträge 27: 259–272.

Haitlinger, R. (1996): New heterocoptid mites (Acari, Astigmata, Heterocoptidae) associated with Cassidinae and Hispinae (Coleoptera, Chrysomelidae) from Africa and Asia. — Linzer biologische Beiträge 28: 979–998.

Hauser, E., Essl, F. & Lichtenberger, F. (1996): Botanisch-entomologische Begleituntersuchung zu den Pflegemassnahmen der Hangwiese im Naturschutzgebiet "Staninger Leiten" (Oberösterreich, Unteres Ennstal). — Beiträge zur Naturkunde Oberösterreichs 4: 67–126.

ICZN [= The International Commission on Zoological Nomenclature] (1999): International Code of Zoological Nomenclature. Fourth edition adopted by the International Union of Biological Sciences. — International Trust for Zoological Nomenclature, London: 306 pp.

Kampen, H. (2002): Die Herbstmilbe *Neotrombicula autumnalis* und andere parasitische Laufmilben (Acaria, Trombiculidae) als Verursacher von Hauterkrankungen in Mitteleuropa. — Denisia 6: 461–476.

Knoflach, B. (2004): Diversity in the copulatory behaviour of comb-footed spiders (Araneae, Theridiidae). — Denisia 12: 161–256.

Knoflach, B. & Bertandi, F. (1993): Spinnen (Araneida) aus Klopffängen an *Juniperus* und *Pinus* in Nordtirol. — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 80: 294–302.

Knoflach, B. & Pfaller, K. (2004): Kugelspinnen – eine Einführung (Araneae, Theridiidae). — Denisia 12: 111–160.

Knoflach, B. & Thaler, K. (1994): Epigäische Spinnen im Föhrenwald der Ötztal-Mündung (Nordtirol, Österreich) (Arachnida: Araneida, Opiliones). — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 81: 123–136.

Knoflach, B. & Thaler, K. (1998): Kugelspinnen und verwandte Familien von Österreich: Ökofaunistische Übersicht (Araneae: Theridiidae, Anapidae, Mysmenidae, Nesticidae). — Stapfia 55: 667–712.

Komposch, Ch. (2004): Die Skorpione Österreichs (Arachnida: Scorpiones). — Denisia 12: 441–458.

Komposch, Ch. & Gruber, J. (2004): Die Weberknechte Österreichs (Arachnida: Opiliones). — Denisia 12: 473–483.

Koomen, P. (1991): Experiences with spider exhibitions in the Netherlands. — Bulletin de la société neuchâteloise des sciences naturelles 116: 133–139.

Kronestedt, T. (2004): Studies on species of Holarctic *Pardosa* groups (Araneae, Lycosidae). VI. On the identity of *Pardosa luciae* TONGIORGI with notes on *P. trailli* (O.P.-CAMBRIDGE) and some other species in the *P. nigra*-group. — Denisia 12: 281–290.

Kropf, Ch. (2004): Eine interessante Kleinspinne: *Comaroma simonii* BERTKAU, 1889 (Arachnida, Araneae, Anapidae). — Denisia 12: 257–270.

Kubcová, L. (2004): A new spider species from the group *Philodromus aureolus* (Araneae: Philodromidae) in Central Europe. — Denisia 12: 291–304.

Kubcová, L. & Buchar, J. (2005): Biologische Beobachtungen an Spinnen der Waldsteppe. — Linzer biologische Beiträge 37: 1325–1352.

Mahnert, V. (2004): Die Pseudoskorpione Österreichs (Arachnida: Pseudoscorpiones). — Denisia 12: 459–471.

Malicky, M., Gusenleitner, F. & Aubrecht, G. (2003): Entwicklung und Struktur der EDV am Biologiezentrum Linz einschliesslich der Biodiversitätsdatenbank ZOBODAT. — Beiträge zur Naturkunde Oberösterreichs 12: 221–240.

Mitov, P.G. (2002): Rare and endemic harvestmen (Opiliones, Arachnida) species from the Balkan Peninsula. I. On *Mediostoma stussineri* (SIMON, 1885) (Nemastomatidae) – a new species and genus for the Bulgarian fauna. — Linzer biologische Beiträge 34: 1639–1648.

Mittermayer, H. & Haditsch, M. (2002): Andere Länder, andere Parasiten – zur reisemedizinischen Bedeutung von Protozoen, Helminthen und Arthropoden. — Denisia 6: 557–571.

Muster, Ch. & Thaler, K. (2004): New species and records of Mediterranean Philodromidae (Arachnida, Araneae): I. *Philodromus aureolus* group. — Denisia 12: 305–326.

Noflatscher, M.T. (1988): Ein Beitrag zur Spinnenfauna Südtirols: Epigäische Spinnen an Xerotherm- und Kulturstandorten bei Albeins (Arachnida: Aranei). — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 75: 147–170.

Noflatscher, M.T. (1991): Beiträge zur Spinnenfauna Südtirols – III: Epigäische Spinnen an Xerotherm – Standorten am Mitterberg, bei Neustift und Sterzing (Arachnida: Aranei). — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 78: 79–92.

Noflatscher, M.T. (1993): Beiträge zur Spinnenfauna Südtirols – IV: Epigäische Spinnen am Vinschgauer Sonnenberg. — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 80: 273–294.

Oswald, J.D. & Makarkin, V.N. (2004): Poison spiders, green lacewings and Russian literature: the minor mystery of a neuropteran biblio-sleuth. — Denisia 13: 147–152.

Paulus, H.F. (2004): Einiges zur Stammesgeschichte der Spinnentiere (Arthropoda, Chelicerata). — Denisia 12: 547–574.

Pfosser, M., Aescht, E. & Kotschwar, S. (2004): DNA, SPINNEN und INTERNET – Forschen im 21. Jahrhundert. Tag der Offenen Tür im Biologiezentrum, 18. September 2004. — Oberösterreichisches Museums-Journal 09–2004: 3–4.

Preleuthner, M., Calderola, S., Lanfranchi, P. & Prosl, H. (1999): Parasiten des Alpenmurmeltieres (*Marmota marmota*): Systematik, Entwicklung, Verbreitung. — Stapfia 63: 77–92.

Rausch, H. & Rausch, R. (2004): 1000 Tage auf entomologischen Forschungsreisen. Unsere gemeinsamen Unternehmungen zur Erforschung der Neuropterida von 1969 bis 2000. — Denisia 13: 67–93.

Relys, V. & Weiss, I. (1997): *Micrargus alpinus* sp. n., eine weitere Art der *M. herbigradus*-Gruppe aus Österreich (Arachnida: Araneae: Linyphiidae). — Revue suisse de Zoologie 104: 491–501.

Ressl, F. (1998): Bemerkenswerte Arthropodenfunde an den Südhängen des Dreieck- und Urmannsberges (Niederösterreich, Bezirk Scheibbs). — Stapfia 55: 663–666.

Ricek, E.W. (1982): Die Lauerposten der Krabbenspinne *Xysticus bifasciatus* C. L. Koch. — Linzer biologische Beiträge 14: 15–22.

Rief, A., Ebenbichler, G. & Thaler, K. (2001): Epigäische Spinnen (Arachnida: Araneae) im Bereich der Waldgrenze bei Innsbruck (Nordtirol, Österreich). — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 88: 141–182.

Roth, A. (1999): Ökofaunistische Analyse der Spinnenzönosen (Arachnida, Araneae) zweier Enns-Inseln in Oberösterreich. — Beiträge zur Naturkunde Oberösterreichs 7: 53–78.

Růžička, V., Kurka, A., Buchar, J. & Rezac, M. (2005): Czech Republic – the type material of spiders (Araneae). — Casopis Národního Muzea. Rada prírodovedná 174: 13–64.

Schaller, F. (2003): Geschichte der Bodenarthropoden-Kunde in Österreich. — Denisia 8: 63–73.

Schatz, H. (2004): Die Hornmilbenfamilie Brachychthoniidae (Acari: Oribatida) in Tirol (Österreich). — Denisia 12: 343–355.

Schikora, H.-B. (2004): *Wubanoides uralensis* (Pakhorukov 1981) – Geographic variation, mating behaviour, postembryonic development and description of a new subspecies (Araneae, Linyphiidae). — Denisia 12: 327–341.

Schuster, R. (1997): Erstnachweise einiger bodenbewohnender Hornmilben-Arten für das Bundesland Oberösterreich (Acari, Oribatida). — Beiträge zur Naturkunde Oberösterreichs 5: 135–138.

Seidl, F. (1993): Erstnachweis der Wespenspinne *Argiope bruennichi* (Scopoli) für Oberösterreich und einige Vorkommen der Art in Bayern. — Beiträge zur Naturkunde Oberösterreichs 1: 25–28.

Stanek, G. (2002): Durch Zecken übertragbare Krankheitserreger in Mitteleuropa. — Denisia 6: 477–496.

Steinberger, K.-H. (2004): Zur Spinnenfauna der Parndorfer Platte, einer Trockenlandschaft im Osten Österreichs (Burgenland) (Arachnida: Araneae, Opiliones). — Denisia 12: 419–440.

Steinberger, K.-H. & Thaler, K. (1994): Fallenfänge von Spinnen im Kulturland des oberösterreichischen Alpenvorlandes (Arachnida: Araneae). — Beiträge zur Naturkunde Oberösterreichs 2: 131–160.

Thaler, K. (1981): Bemerkenswerte Spinnenfunde in Nordtirol (Österreich) (Arachnida: Aranei). — Veröffentlichungen des Tiroler Landesmuseum Ferdinandeum 61: 105–150.

Thaler, K. (1988): Fragmenta Faunistica Tirolensia – 8 (Arachnida: Aranei, Opiliones; Myriapoda: Diplopoda; Insecta: Coleoptera). — Berichte des Naturwissenschaftlich-Medizinischen Vereins in Innsbruck 75: 115–124.

Thaler, K. (1997): *Tallusia pindos* n. sp. aus N-Griechenland (Araneae, Linyphiidae). — Linzer biologische Beiträge 29: 377–384.

Thaler, K. (1999): *Heterolinyphia secunda* n. sp. aus Bhutan (Araneae, Linyphiidae). — Linzer biologische Beiträge 31: 987–991.

Thaler, K. (Sci. ed., 2004): Diversität und Biologie von Webspinnen, Skorpionen und anderen Spinnentieren (Diversity and biology of spiders, scorpions and other arachnids). — Denisia 12: vi pp., 586 pp.

Thaler, K. & Gruber, J. (2003): Zur Geschichte der Arachnologie in Österreich 1758–1955. — Denisia 8: 139–164.

Thaler, K. & Knoflach, B. (1995): Adventive Spinnentiere in Österreich – mit Ausblicken auf die Nachbarländer (Arachnida ohne Acari). — Stapfia 37: 55–76.

Thaler, K. & Knoflach, B. (2002): Zur Faunistik von Spinnen (Araneae) von Österreich: Atypidae, Haplogynae, Eresidae, Zodariidae, Mimetidae. — Linzer biologische Beiträge 34: 413–444.

Thaler, K. & Knoflach, B. (2003): Zur Faunistik der Spinnen (Araneae) von Österreich: Orbiculariae p.p. (Araneidae, Tetragnathidae, Theridiosomatidae, Uloboridae). — Linzer biologische Beiträge 35: 613–655.

Thaler, K. & Knoflach, B. (2004a): Fauna Austriaca: Webspinnen – zur Einführung (Arachnida, Araneae). — Denisia 12: 357–380.

Thaler, K. & Knoflach, B. (2004b): Zur Faunistik der Spinnen (Araneae) von Österreich: Gnaphosidae, Thomisidae (Dionycha pro parte). — Linzer biologische Beiträge 36: 417–484.

Thaler, K. & Meyer, E. (1994): Zoologische Bestandeserhebung in den Untersuchungsräumen Enns und Bachmanning (Oberösterreich) – Terrestrische Wirbellose und Bodenfauna (Testacea, Ciliata, Collembola, Lumbricidae, Aranei, Carabidae, Staphylinidae, Lepidoptera). — Bericht an die Oberösterreichische Landesregierung: 112 pp.

Thaler, K., Buchar, J. & Knoflach, B. (2000): Notes on wolf spiders from Greece (Araneae, Lycosidae). — Linzer biologische Beiträge 32: 1071–1091.

Thaler, K., van Harten, A. & Knoflach, B. (2004): Pirate spiders of the genus *Ero* C. L. Koch from southern Europe, Yemen, and Ivory Coast, with two new species (Arachnida, Araneae, Mimetidae). — Denisia 13: 359–368.

Trenkwalder, A. (1997): Hygrophile Spinnen in Südtirol: Die Spinnenfauna des Naturschutzgebietes Raier Moos. — Diplom-Arbeit Universität Innsbruck: 135 pp.

Vöth, W. (1999): Lebensgeschichte und Bestäuber der Orchideen am Beispiel von Niederösterreich. — Stapfia 65: 257 pp.

Walochnik, J. & Aescht, E. (2002): Glossar medizinischer und biologischer Fachbegriffe. — Denisia 6: 573–596.

Walochnik, J. & Aspöck, H. (2002): Die Parasiten des Menschen im phylogenetischen System. — Denisia 6: 115–132.

Weiss, I. (1996): Die Weberknechtfauna Siebenbürgens (Arachnida: Opiliones). — Stapfia 45: 259–280.

Weiss, I. (1998a): *Ozyptila danubiana* spec. nova aus dem Donau-Delta, Rumänien (Araneae, Thomisidae). — Linzer biologische Beiträge 30: 259–262.

Weiss, I. (1998b): *Astenargus carpaticus* spec. nova aus dem Fogarascher Gebirge, Rumänien (Araneae, Linyphiidae). — Linzer biologische Beiträge 30: 455–457.

Weiss, I. & Rusdea, E. (1998): Validierung der endemischen Trichterspinne *Histopona* (Kulczynski, 1897) mit Erstbeschreibung des Männchens (Arachnida: Araneae: Agelenidae). — Mauritiana (Altenburg) 16: 515–520.

Weiss, I. & Schneider, E. (1996): Erstbeschreibung des Weibchens von *Dactylopisthes digiticeps* (Simon, 1881) (Arachnida: Araneae: Linyphiidae). — Annalen des Naturhistorischen Museums in Wien 98B: 111–116.

Weiss, I., Schneider, E. & Andriescu, I. (1998a): Die Spinnen des Biosphärenreservates Donau-Delta, Rumänien (Arachnida, Araneae). — Linzer biologische Beiträge 30: 263–275.

Weiss, I., Szinetar, C. & Samu, F. (1998b): Zur Taxonomie von *Cryptodrassus hungaricus* (Balogh, 1935) (Araneae: Gnaphosidae). — Arachnologische Mitteilungen 16: 56–59.

Weissmair, W. & Hauser, E. (1993): Fauna der Rettenbachhöhle (Biospeläologie; Oberösterreich). — Linzer biologische Beiträge 25: 373–385.

Address of the author:

Dr. Erna Aescht
Biologiezentrum der Oberösterreichischen Landesmuseen
J.-W.-Klein-Str. 73
A–4040 Linz, Austria

E-mail: e.aescht@landesmuseum.at