ANNOUNCEMENTS

As of 4-IV-1991, Mrs. Annette K. Secombe transferred from the British Museum (Natural History) to a position elsewhere in the Civil Service. She has been replaced by Miss T. M. Howard who is now responsible for the flea collection. Requests and correspondence concerning the flea collection should be addressed to her in care of the Department of Entomology.

The Ceratophyllidae Revisited

We recently received the following commentary from the Honourable Miriam Rothschild, FRS, with a request that it be included in Flea News.

"It is most fortunate that R. E. Lewis has published such a useful volume covering the currently accepted valid taxa of the Ceratophyllidae; apart from its intrinsic excellence it compliments and enhances our volume cataloguing the Rothschild and British Museum Collection of this 'difficult' group of fleas.

"In this we have described and illustrated the genera and subgenera of the family (206 text figures, 532 photographs, and 48 distribution maps), and in addition provided 175 maps showing the geographical distribution of all the species and major subspecies of the family and their hosts.

"As circumstances prevented us describing the taxonomy of the fleas down to species level (as in previous volumes) we did not designate the monograph as No. 8 of the Catalogue of the Rothschild Collection of Fleas, but it does belong to that series, and we thus fulfilled on behalf of the Trustees of the British Museum (Natural History) the terms of the N. C. Rothschild gift (The Rothschild Collection of Fleas , Vol. I, 1953, pp. 357-358)." M. Rothschild, 9-I-1991.

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The Society of Vector Ecology

SOVE is an organization of professionals dealing with ecology, prevention, and control of insects and other arthropods and organisms of public health importance. The Society holds an annual conference as well as regional meetings for the purpose of sharing information among its membership. This year's annual conference will be held November 18-20 at the Nugget Hotel, Sparks, Nevada. Contact B. Fred Beams, P. O. Box 87, Santa Ana, California 92702, Ph. (714) 971-2421 or Fax No. (714) 971-3940.
Announcements (Continued)

Drs. Jay and Marion Georgi send the following news about their activities:

"We are currently conducting personally funded research on artificially fed *Ctenocephalides felis* with the goals of improving the efficiency of our methods, determining biologic optima, maximizing production, and developing research and commercial applications. Our present 'artificial dog' has 20 units, each populated with 100-200 fleas and daily yields 3000 to 4000 adult fleas. Many more fertile eggs than this are produced but we have yet to determine optimum cultural conditions for very large numbers of larvae. We would be happy to supply information to others interested in adopting our techniques and to exchange information with those already engaged in the artificial rearing of fleas.

"Having completed the manuscript of *Canine Clinical Parasitology*, to be published later this year by Lea & Febiger of Philadelphia, we are now starting to work on *The Cat Flea and the Artificial Dog*, which we intend will include both classic information and the results of current research on the biology of *Ctenocephalides felis*, including those stemming from our own investigations alluded to above. Although we are fortunate to have the excellent library facilities of Cornell University at our disposal, we would nevertheless be most grateful for reprints of published reports on any subject directly related to the cat flea."

Drs. Georgi may be contacted at: Fleadata, 132 Starr Stanton Road, Freeville, New York 13068-9802. (607) 844-8507.

We have recently been apprised of the deaths of Dr. Renata Costantini (29-I-1991) and Prof. Dr. med. Heinzi Eberhard Krampitz (2-VII-1921 - 12-V. 1991). We hope to have biographical information on these two colleagues for the next issue of Flea News.

In her communication about Dr. Costantini, Dr. Albertina Iori of the Istituto di Parassitologia, Università di Roma, included an inventory of the flea collection at that institution. Interested parties may obtain a copy by request to Flea News.

Your attention is drawn to a new newsletter called *Plague Surveillance* produced by the Division of Vector-Borne Infectious Diseases, Center for Disease Control, P. O. Box 2087, Fort Collins, CO 80522 and edited by Drs. Allan Barnes and David Dennis. The introduction to volume 1, number 1

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(June, 1991) states "This issue is the first in a continuing series of communications on plague epidemiology, surveillance and control in the western United States. The series will emphasize data on trends among animal vector and pathogen populations involved in the natural plague cycle and present summaries of human cases, epizootic investigations, surveillance methodologies, preventive control, and other items concerned with plague. It may, from time-to-time, present information on international plague events."

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BOOK REVIEWS


The flea fauna of Mongolia has attracted the attention of pulicologists since Jordan (1929) reported on collections made in the area by H. M. Jetmar in 1927-1928. In the past few decades the country has been the focus of cooperative field studies between Mongolian scientists and workers from Hungary, Czechoslovakia, Germany and the USSR. This volume is a summary of the accumulated information about the flea fauna of the Republic.

Following a brief introduction is a section dealing with the collection of fleas and their preparation for study. This is followed by a section treating the anatomy of adult fleas, with particular emphasis on structures of taxonomic importance. The bulk of the book is devoted to keys to the 190 species and subspecies now known to occur within the political boundaries of the country. The book concludes with a list of the 426 illustrations and their sources, a list of the taxa and their figure numbers, a list of junior synonyms, a bibliography, an index and a table of contents.

The format is typical of most Russian catalogues published during the last 50 years in that each taxon listing is followed by a brief statement about the distribution and host associations. Additional references to the species are also usually cited.

In a work of this scope one must expect the introduction of nomenclatural variations that may not be in accord with commonly

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accepted current usage. Following is a review of the variants noted by the reviewer.

The authors follow the classification of Smit (1962) in splitting the Ctenophthalmidae from the Hystrichopsyllidae, but they retain the Ceratophyllidae and Leptopsyllidae as full families. The taxa are distributed as follows in the order in which they are treated. Numbers of species and subspecies are included along with the number of genera in parentheses. Pulicidae 11, (6); Ceratophyllidae 55, (11); Leptopsyllidae 66, (9); Ischnopsyllidae 4, (2); Ctenophthalmidae 42, (8); Hystrichopsyllidae 2, (1), Coptopsyllidae 2, (1) and Vermipsyllidae 8, (3).

Subspecies of Xenopsylla conformis (Wagner, 1903) are not recognized. Oropsylla ilovaiskii Wagner & Ioff, 1926, is treated as a subspecies of O. idahoensis (Baker, 1904).

No subspecies of either Amphalus clarus (Jordan & Rothschild, 1922) or A. runatus (Jordan & Rothschild, 1923) are recognized.

Nasopsyllus laeviceps gobiensis Cyprich, Kiefer & Cendenren, 1977, is kept separate from N. l. ellobii (Wagner, 1933) although it was synonymized by Smit (1980c: 78).

Citellophilus altaicus (Ioff, 1936) is treated as a subspecies of C. tesquorum. C. sungarisis (Jordan, 1929) is also assigned as a subspecies of C. tesquorum.

No subspecies of either Ceratophyllus enefdei Ioff, 1950 or C. rossittensis Dampf, 1913 are recognized.

Ceratophyllus vagabundus dimi Mikulin, 1958 is retained, although it was synonymized with C. v. insularis Rothschild, 1906 by Brinck-Lindroth & Smit, 1971.

Ceratophyllus styx avicitelli Ioff, 1946 is retained, although synonymized by Liu et al., 1986.

Igioffius taiganus (Scalon, 1950) is still assigned to the genus Megabothris.

Two undescribed subspecies of Analaraeus dissimilis are mentioned. Ochotonobius hirticus (Jordan & Rothschild, 1923) is still assigned to the genus Ctenophyllus.

Frontopsylla (Frontopsylla) luceulenta parilis Jordan, 1929 is retained, although synonymized with F. (F.) luceulenta (Jordan & Rothschild, 1923) by Liu et al., 1986.

Frontopsylla (Frontopsylla) elata caucasica Ioff & ArgYROpulo, 1934 is elevated to full species rank. Also, an undescribed subspecies of F. elata is

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mentioned.

*Frontopsylla* (*Frontopsylla* postprojectia) Quan, Ai-min & Zhong-yuan, 1985. (The citation for this taxon does not appear in the reference section but the species obviously relates to: Liu Quan, Qi Ai-min & Li Zhong-yuan, 1985. Acta zoootax. sin. 10(4): 431-433, figs. 1-6.)

*Frontopsylla* (*Orfontiala*) *lapponica prior* Scalon, 1965 is retained in figure captions 189-190, although the subspecies was synonymized with *F. lapponica* (Nordberg, 1935; by Smit & Wright, 1978a: 40.

*Ophthalmopsylla* (*Ophthalmopsylla*) *extrema* Ioff & Scalon, 1953 is treated as a subspecies of *O. (O.) volgensis*.


*Paradoxopsyllus alatau* Shvartz, 1953 and *P. kalabukhoi* Labunets, 1961 are treated as subspecies of *P. hesperius* Ioff, 1946.

*Paradoxopsyllus socrates* Kunitskaya & Kunitsky, 1978 is treated as a synonym of *P. conveniens* Wagner, 1939.

*Mesopsylla eucta shikho* Ioff, 1950 is assigned as a subspecies of *M. tuschkan*.

Subspecies of *Peromyopsylla bidentata* (Kolenati, 1863) are not recognized.


Undescribed subspecies of *Neopsylla mana* Wagner, 1927 are mentioned.

Subspecies of *Neopsylla setosa* Wagner, 1898 are not recognized.

Subgenera *Hystrichopsylla* and *Hystroceras* are retained in the genus *Hystrichopsylla*.

With the addition of this and the following volume to the monographs by Ioff & Scalon, 1954, Sakaguti, 1962, Ioff, Mikulin & Scalon, 1985, Liu et al., 1981 and Liu et al., 1986 our knowledge of the flea fauna of eastern Asia nearly rivals that of the fauna of western Europe. -REL

**The flea fauna of Xinjiang.** By Yu Xin, Ye Rui-yu & Xie Xing-chu. Xinjiang People's Publishing House. 1990. Urumqi, China. 542 pp., 549 figs., pls. I-X. U.S. $50.00 [includes air mail postage].

That this and the preceding volume should appear so recently is an interesting coincidence. The two areas are similar in size (Xinjiang = 635,800 sq. mi., Mongolia = 604,250 sq. mi.), topography, and, to a large

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extent, climate. However, the flea fauna of Xinjiang is somewhat poorer, currently consisting of only 181 named taxa in 40 genera, distributed as follows: Cératophyllidae 50, (12); Coptopsyllidae 2, (1); Hystrichopsyllidae 35, (9); Ischnopsyllidae 3, (1); Leptopsyllidae 68, (8); Pulicidae 14, (6) and Vermipsyllidae 9, (3). The authors do not separate the Ctenophthalmidae from the Hystrichopsyllidae. Both areas reside in the Mongolian faunal region as delineated by Stegmann (1938) [Principes généraux des subdivisions ornithogéographiques de la région paléarctique. Faune de l'URSS. Acad Sci. URSS 1(2): 156], and the fauna is typical of the Palaeartic Region.

The book is divided into six parts. Part one consists of a general account of the order Siphonaptera with particular reference to Xinjiang Province and treats the history of flea research, the anatomy and morphology of both the adults and larvae as well as their biology, ecology, phylogeny and geographic distribution. The relation of fleas to disease and survey, preservation and control techniques are also included in this section.

The bulk of the book deals with systematic accounts of the indigenous species and their morphology, biology, ecology and medical significance, if known. While the species are illustrated by adequate figures, the captions are in Chinese only, and a reader unfamiliar with this language must refer to the species accounts to determine which figures apply to which taxon.

Part three is a brief English résumé of the book including an English summary of the six new taxa described in the text.

Part four contains three appendices dealing with; 1) a distribution table of the fleas of Xinjiang; 2) a list of Chinese names of the fleas of Xinjiang and their Latin equivalents; and 3) a list of Chinese names of host animals and their Latin equivalents.

Part five contains the literature cited arranged in Chinese, English and Russian.

Part six contains indices in both Chinese and Latin and a final appendix listing four additional taxa discovered after the work was completed. Following are the data pertaining to the six new species and subspecies.

Coptopsylla lamellifer tarimensis Yu, Ye & Cao, 1990.


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**Vermipsylla yeae** Yu & Li, 1990.
PRC, Xinjiang, Yili district, from *Ovis aries* and *Equus caballus*, XI.1985. Holotype male, allotype female, 1 male and 6 female paratypes.

**Stenopsylla meridiana** Cao, Xie & Yu, 1990.

**Ctenophyllus (Ctenophyllus) armatus altaicus** Yu, 1990.

**Ophthalmopsylla (Ophthalmopsylla) volgensis wugiaensis** Yu, Shen & Ye, 1990.
PRC, Xinjiang, Wuqia [-Wugia, Wukia, Ulugqat, Ulugh Chat], 39.50N 74.20E, ca. 2050m, from *Alloctaga sibirica*, VII-VIII.1986. Holotype male, 8 male paratypes.

**Callopsylla (Callopsylla) yui** Ye & Jiang, 1990.
PRC, Xinjiang, Qitai county, Beita Mt, from *Lagurus lagurus*, V.1980. Holotype male, allotype female, 20 male and 21 female paratypes.

As far as we can ascertain all primary types (i.e., holotypes) are deposited in the Xinjiang Institute for Endemic Disease Control and Research, Urumqj. -REL

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**REPRINTS RECEIVED**

The following readers have sent reprints or other literature sources since *Flea News* 41. Thank you. We are most grateful for your cooperation!


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MAILING LISTS

Additions

Dr. Harry N. Cunningham, Jr., Division of Science, Engineering & Technology, Penn State Erie, Station Road, Erie, PA 16563-0203.

Ms. Theresa M. Howard, Siphonaptera Section, British Museum (Natural History), Cromwell Road, London SW7 5BD, England.

Dr. Albertina Iori, Istituto di Parassitologia, Università "la Sapienza", Piazzale Aldo Moro, 5, 00185 Roma, Italia.

Dr. Susan Lewis, Medical Entomology Centre, Austin Building, New Museums Site, Pembroke Street, Cambridge CB2 3DX, England.

Dr. James D. Long, V.S.C.D., E.H.S., Department of Public Health Services, P. O. Box 85261, San Diego, CA 92186-5261.

Dr. Donald H. Miller, Department of Science, Lyndon State College, Lyndonville, VT 05851.

Mr. Vernon A. Nelson, Department of Biology, Southern Connecticut State University, New Haven, CT 16515.

Ms. Monique Palaysi, Service de Documentation, Rhône Mérieux, 1, Chemin du Calquet, 31057 Toulouse Cédex, France.

Dr. Robert M. Timm, Museum of Natural History, University of Kansas, Lawrence, KS 66045.

Changes

Mr. William Bender, 3712 Sachem Hill, Cincinnati, OH 45226 USA

Dr. Jenella Loye, Department of Entomology, University of California - Davis, Davis, CA 95616.

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Provisional lists of taxa described since 1989

1989

Palaeopsylla laxidigita Xie & Gong
Palaeopsylla polyspina Xie & Gong
Palaeopsylla medimina Xie & Gong
Ctenophthalmus (Palaeoctenophthalmus) harputus Aktaş
Ctenophthalmus (Ctenophthalmus) solutus nasutus Beaucournu, Valle & Launay
Citellophilus simplex rosickyi Cyprich
Xenopsylla guancha Beaucournu, Alcover & Launay
Stenischia chini Xie & Lin
Stenischia liae Xie & Lin
Stenischia liui Xie & Lin
Stenischia wui Xie & Lin
Lagaropsylla duodecima Beaucournu & Kock
Jellisonia amadoi Ponce-Ulloa
Jellisonia mexicana Ponce-Ulloa
Plocopsylla crypta Beaucournu & Gallardo
Rowleyella gongshanensis Gong & Duan

1990

Hectopsylla pascuali Beaucournu & Alcover
Plocopsylla consobrina Beaucournu & Alcover
Agastopsylla boxi gibosa Beaucournu & Alcover
Chilipsylla allophyla tonnii Beaucournu & Alcover
Geusibia digitiforma Gong & Lin
Rhadinopsylla (Sinorhadinopsylla) lei Xie, Gong & Duan
Ceratophyllus (Emmareus) liae Wu & Li
Smitipsylla quadrata Xie & Li
Rowleyella nuijiangensis Lin & Xie
Macrostylesphora bispiniforma gongshanensis Gong & Xie
Hystrichopsylla illorentei Ayala & Morales

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Tel. (515) 294 1815   Fax. (515) 294 8027   BitNet A1.REL@ISUMVS
Jellisongia guerrerensis Morales  
Ctenoparia intermedia Beaucournu & Kelt  
Plocopsylla wilesi Beaucournu & Kelt  
Plocopsylla siensi Beaucournu & Kelt  
Tiamastus gallardo Beaucournu & Kelt  
Liouopsylla clavula Xie & Duan  
Nosopsyllus wualis rongjiangensis Li & Huang  
Nosopsyllus wualis bosensis Li & Pan  
Nosopsyllus wualis diandongensis Li, Xie & Yang  
Nosopsyllus elongatus longchuanensis Li, Xie & Wu  
Nosopsyllus elongatus puercensis Li, Xie & Yu  
Nosopsyllus elongatus yanshanensis Li, Xie & Liao  
Coptopsylla lamellifer tarimensis Yu, Ye & Cai  
Vermipsylla yeeYu & Li  
Stenoponia meridiana Cao, Xie & Yu  
Ctenophyllus (Ctenophyllus) armatus altaicus Yu  
Ophthalmopsylla (Ophthalmopsylla) volgensis wuqiaensis Yu, Shen & Ye  
Calloopsylla (Calloopsylla) yui Ye & Jiang  
Leptopsylla (Leptopsylla) algira vogeli Beaucournu

1991

Xenopsylla cuisancei Beaucournu & Morel  
Parapsyllus senellarti Beaucournu & Rodhain

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LITERATURE ON SIPHONAPTERA
(1985-1986)

1985 (List 12)  

1986 (List 10)  
Li L. & Chen N.-h. Preliminary survey of rodent-like animals and their

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1987 (List 8)


1988 (List 7)


Gants, R. Choose your weapon against fleas and ticks. *Vet. Econ.* April, 76...95.

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1989 (List 5)


Bei-Bienko, G. Ya (Ed.) Keys to the insects of the european part of the USSR. Volume V. Diptera and Siphonaptera. Part I. Leiden, Netherlands, E. J. Brill. xxii-1233 pp. [Keys to the fauna of the USSR, No. 100.]

Bei-Bienko, G. Ya (Ed.) Keys to the insects of the european part of the USSR. Volume V. Diptera and Siphonaptera. Part II. Leiden.

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Netherlands, E. J. Brill. xxi-1505 pp. [Keys to the fauna of the USSR, No. 103.]


George, R. S. Some bird flea records from Britain (Siphonaptera). *Entomologist's Gaz.* 40(4): 914.


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1990 (List 3)


Dudich, A. & M. Ambros. Third addendum to the Siphonapterofauna (Siphonaptera, Insecta) of small ground mammals of the Tribic Mts. (West Carpathians). Rosalia (Nitra) 6: 283-296.


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Stanko, M. Recent state of knowledge of ectoparasite fauna (Siphonaptera, Mesostigmata, Ixodidae) of small mammal of the Zoological Garden in Košice. *In. XIIIth TOP* (Košice - Kavečany) · Review of scientific results, pp. 53-67.

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Webster, J. My fleas have worms - Marketing veterinary health services. *Australian Vet. Pract.*, 20(3): 152.


Wu Wen-zhen & Li Chao. A new species of bird flea (Siphonaptera: Ceratophyllidae) from Qinghai province, China. *Acta ent. sin.*, 33(2): 247-249, figs. 1-4. [Ceratophyllus *Emmacarens* liae Wu & Li]


1991 (List 1)


Belk, M. C. & B. S. Smith. *Ammospermophilus leucurus*. *Mammalian*

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Species 368: 1-8, 3 figs. [Siph.: 4]

Cyprich, D. & M. Kiefer. On the occurrence of fleas in the nests of the rat (Rattus norvegicus Berkenhout) in Slovakia. *Biologia* 46(2): 151-


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**O'Shea, T. J.** *Xerus rutilus*. **Mammalian Species** 370: 1-5, 3 figs. [Siph.: 3]


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It will be understood that - although their titles are given in English in these lists - papers in Russian or Chinese periodicals, or books published in

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the USSR or China, are in Russian or Chinese (but often with summaries in English).

"1 March is particularly connected with fleas in Sussex. The saying is, 'On the first of March, the fleas start jumping.' In West Sussex, we say, 'Never open your windows, or you will get a swarm of fleas in the house.' In East Sussex, they say, 'Always open your windows, or you will get a swarm of fleas in the house.' Another version is, 'If from the fleas you would be free, on the first of March let all your doors and windows open be.'

'This comes from West Sussex. In East Sussex, the final words are 'closed be'.

'Whether you believe in the East or West Sussex admonitions, 1 March seems to be the day to start spring cleaning, by sweeping out the cracks of the doors and windows. No doubt fleas were once a very great 'irritation' to the good Sussex housewives.'

(from: Chapter 2, Fleas, Cuckoos and Cocks, in A Sussex Garland, a lighthearted collection of rhymes, recollections and recipes of the Sussex year, by Tony Wales. Published by Countryside Books. Newbury, Berkshire. Date unknown to us. Courtesy of Richard Lane, London School of Hygiene and Tropical Medicine.)

Flea News is a twice annual newsletter devoted to matters involving insects belonging to the order Siphonaptera. It is compiled and distributed free of charge (so far) by Robert E. and Joanne H. Lewis with support from the Department of Entomology at Iowa State University in Ames, Iowa, USA. It is mainly bibliographic in nature, but recipients are urged to check any citations cited here before including them in a publication. Many of the sources are abstracting journals and current literature sources such as Current Contents® and citations have not necessarily been checked for accuracy. Further, recipients are urged to contribute items of interest to the profession for inclusion herein. -REL

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