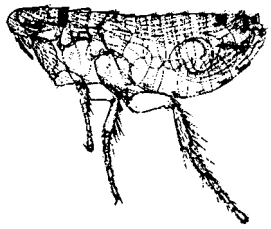
flea NEWS 53



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FLEA NEWS is a biannual newsletter devoted to matters involving insects belonging to the order Siphonaptera (fleas) and related subjects. It is compiled and distributed free of charge by Robert E. Lewis (relewis@iastate.edu) in cooperation with the Department of Entomology at Iowa State University, Ames, IA, and a grant in aid from **Sandoz Animal Health**, based in Des Plaines, IL. It is mainly bibliograph-ic in nature. Many of the sources are abstracting journals and title pages and not all citations have been checked for completeness or accuracy. Additional information will be provided upon written or e-mail request. Further, recipients are urged to contri-bute items of interest to the profess-ion for inclusion herein.

This newsletter is now available in electronic format. The preferred method of accessing the electronic version is through the WorldWide Web at the following Universal Res-ource Locator: <http://www.ent.iastate.edu/FleaNews/AboutFleaNews.html> or through the internet via anonymous FTP: <ftp.ent.iastate.edu> in the "Publications" directory. Electronic versions are available for No. 46, July, 1993; No. 47, December, 1993; No. 48, July, 1994; No. 49, December, 1994; No. 50, June, 1995; No. 51, December, 1995; No. 52, June, 1996 and this number.

The opinions and assertions contained herein are the private ones of the authors and are not to be construed as official or as reflecting the views of the Department of Entomology, Iowa State University or Sandoz Animal Health.

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NOTICE

Effective 1-January-1997 I will have retired from the Iowa State University. I intend to remain active professionally and will continue to produce this newsletter as long as there is support for it. After January first I may be contacted in the following ways:

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BOOK REVIEWS

Since the last issue of Flea News, three rather extensive publications have appeared dealing with three separate parts of the world. Two of these are faunal inventories, one for North America north of Mexico (not yet published at this writing), the other for Australia. The third is a more comprehensive treatment of the South African fauna. Following are reviews of these publications.

Nomina Insecta Nearctica Volume 3. Diptera, Lepidoptera, Siphonaptera.

Compiled by Robert W. Poole and edited by Robert W. Poole and Patricia Gentili. Published by Entomological Information Services. P. O. Box 4350, Rockville, MD 20849-4350 USA.

In Flea News 52: 600 I briefly mentioned this series, based on an announcement of the publication of Volume 1, which dealt with the Coleoptera and Strepsiptera. Shortly thereafter I was contacted by Dr. Poole, inquiring whether I would be willing to cooperate with him by providing the chapter on the Siphonaptera for Volume 3. This I have done, and it is my understanding that the volume will be available early in January of 1997. Though I have not seen the finished product, I have a copy of the chapter in its final form, and am basing this review on it.

The Siphonaptera chapter differs from those dealing with the other orders in that it includes subspecies. Opposed as I am to the subspecies category, arbitrarily ignoring it in this order without resorting to studying the types would be both confusing and a disservice to the taxonomic community. As I point out under the heading of STATISTICS, "... the subjective nature of the infraspecific category itself makes it likely that the number of valid North American taxa will diminish rather than increase as generic revisions are completed."

The chapter begins with a brief Introduction and a short section on Statistics, including the number of species erected for the North American fauna from 1758 to 1996 in increments of 10 years. Following this is a table in which the eight families found in North America are named, with the total number of names associated with each family, followed by the actual number of "valid" species names. The totals are 562 names and 314 valid species.

Next is a list of all of the family names that have been applied in the order, including junior synonyms, and families not represented in North America. The junior synonyms are associated with currently accepted family names. There follows a classification of the North American Siphonaptera in which the eight families are assigned to five superfamilies following the system established by Smit (1982) in S. P. Parker (ed.) *Synopsis and classification of living organisms.* McGraw-Hill Book Company, pp. 557-563.

The remainder of the chapter consists of three parts in which the North American fauna is listed in differing formats. The first is an alphabetical listing of the families under which the genera and species are also listed alphabetically, as well as their original generic designation, subspecies, synonyms and other invalid applications. Generic synonyms and other misapplications are included under their respective genera. The second part is an alphabetical list of all species, subspecies and synonyms, including the name of the author, original generic

assignment, family and present generic assignment. Junior synonyms are accompanied by their senior counterparts. The last section is an alphabetical list of all genera, their authors and family assignment. Junior synonyms are also indicated. The last two sections are indices and the finished product will include page numbers.

While such checklists provide little beyond nomenclatural inform-ation, they are essential, since they are an indication of taxonomic opinion at the time of publication and provide a framework for a more extensive treatment of the group. It is the expectation of the compiler that this series will ultimately be extended to include the entire world fauna.

Calder, A. N. (1996). **Siphonaptera.** pp. 136-181, 185-197 (App. IV), 222-226 (Index). *In:* A. Wells (ed.) *Zoological Catalogue of Australia*. Volume 28. Neuroptera, Strepsiptera, Mecoptera, Siphonaptera. Melbourne : CSIRO Publishing, Australia ISBN 0-643-05801-X. P.O.Box 1139 [Oxford Street]
Collingwood, Victoria 3066, Aust-ralia). <sales@publish.csiro.au>

Over the years the scientific community has come to expect a level of excellence from the Common-wealth Scientific & Industrial Res-earch Organization and its associates seldom approximated in other parts of the world. *The Zoological Catal-ogue of Australia,* compiled under the auspices of the Australian Biological Resources Study and published by the CSIRO admirably continues this tradition. Although four insect orders are included in Volume 28, the following review applies only to the chapter on the Siphonaptera by Andrew A. Calder.

Page 136 contains illustrations of the head and prothorax of repre-sentatives of eight of the nine siphonapteran families found in Australia and adjacent islands. The next six pages contain introductory remarks on the order, brief notes about the catalogue, acknowledge-ments and a list of pertinent refer-ences. The following pages con-tain accounts of the families, genera and species known from the country, arranged alphabetically. Each family account begins with a brief intro-duction and a list of pertinent references. The genera, subgenera, species and subspecies are ac-companied by appropriate biblio-graphic, nomenclatural and distrib-utional information, as well as host associations. Primary type data are also included. Discounting the few recognized subspecies, the 34 genera and 81 species are distributed as follows:

Ceratophyllidae 3 : 4 (3)
Hystrichopsyllidae 2 : 2
Ischnopsyllidae 4 : 7
Leptopsyllidae 1 : 1 (1)
Macropsyllidae 2 : 2
Pulicidae 5 : 20 (7):
Pygiopsyllidae 14 : 33
Rhopalopsyllidae 1 : 4
Stephanocircidae 2 : 8

Eleven of these species are deemed adventive by this reviewer and these are indicated by the numbers in parentheses after the Ceratophyl-lidae, Leptopsyllidae and Pulicidae.

Appendix IV contains a listing of the host-flea associations. Ignoring the single species taken from a snake as an accidental association, 41 avian and 121 mammalian taxa are listed as hosts of Australian fleas. There is also a separate index for the Siphonaptera,

as there is for the three other insect orders included in this volume.

Certainly the most detailed treatment of the Australian flea fauna is that of Dunnet and Mardon (1974) (Australian Journal of Zoology. Supplementary Series No. 30: 1-273) and workers seeking identification of Australian collections must still refer to it for the necessary keys. However, in the intervening 22 years a few nomenclatural changes have been made and these may be easily traced in the present volume. They are described below, with the under-standing that the comments apply only to the Australian members of the genera.

Ceratophyllidae

Although Dunnet & Mardon (1974) mention *Glaciopsyllus antarcticus* Smit & Dunnet, 1962, it is not included in their key to the genera.

Ischnopsyllidae

Serendipsylla marshalli Smit, 1975, was unknown in 1974.

Pygiopsyllidae

Certainly the most changes have been made in this family, and doubtless many more await.

Acanthopsylla incerta Holland, 1971, was synonymized with *A. pavida* (Rothschild, 1916) by Mardon (1981).

Choristopsylla leptophallus Mardon, 1977, brings to four the species assigned to this genus.

Bibikovana Traub, 1980, as erected for species formerly assigned to *Pygiopsylla* Rothschild, 1906, is as follows: *arcuata* (Holland, 1971); *colossa* (Rothschild, 1906); *gravis* (Rothschild, 1908); *iridis* (Holland, 1971); *rainbowi* (Rothschild, 1908), and *rainbowi inusitata* Mardon and Allison, 1982, was subsequently described.

Pygiopsylla is now restricted to: *hilli* (Rothschild, 1904); *hoplia* Jordan & Rothschild, 1922; *phiola* Smit, 1979; *tunneyi* Mardon & Dunnet, 1972, and *zethi* (Rothschild, 1904).

In summary, this is a most useful treatment of the flea fauna, both because of its currency and its format. The author, although not a specialist in fleas, has done an excellent job of reviewing the pertinent literature and nomen-clature in the order and should be highly commended for his accomplishment.

Segerman, J. (1995). **Siphonaptera of southern Africa. Handbook for the identification of fleas.** Publications of the South African Institute for Medic-al Research No. 57. 264 pp. ISBN No. 1-874813-06-X. Natal Witness Printing & Publishing Company. (price not known). SAIMR, Hospital Street, P.O.Box 1038, Johannesburg 2000, South Africa.

It has been slightly over 35 years since the publication of DeMeillon, Davis & Hardy (1961), *Plague in Southern Africa. Volume 1. The Siphonaptera (excluding) Ischnops-yllidae,* and Marcus (1961) "The bat fleas of Southern Africa (Siphon-aptera: Ischnopsyllidae)." (J. Ento-mol. Soc. S. Afr. 24(1): 173-211). During this period much research has been pursued in southern Africa, both on the flea fauna and its relationship to disease transmission, specifically, plague. Now the fauna is well known, and it is likely that few, if any, additional taxa will be discovered. This volume by Joyce Segerman deals with essentially the same geographical area as the publications cited above and is an admirable summary of accomplish ments during the intervening period. However, as might be expected, some changes in nomenclature and species allocation have taken place over this period and these are noted below.

The families Ceratophyllidae (2 genera/3 species); Leptopsyllidae (1/2); Rhopalopsyllidae (1/1) and Tungidae (1/1) are identical in both works. The family name Hypsophth-almidae Wagner, 1939, (7/24) has been replaced by the **Chimaero-psyllidae** Cunha, 1941, in the Segerman volume, *Demeillonia miriamae* Hopkins & DeMeillon, 1964, has been added, and *Chiast-opsylla mulleri* is treated as three subspecies, the nominate form, *C. m. longisetis* Ingram, 1927, and *C. m. simplex* Haeselbarth, 1965.

In the **Hystrichopsyllidae** (4/17), *Cryptoctenopsyllus* Wagner, 1939, is assigned as a subgenus of *Dino-psyllus* Jordan & Rothschild, 1913, for *D. ingens* (Rothschild, 1900). *Listropsylla chelura alticola* Haesel-barth, 1963, has been added. DeMeillon et al. (1961) included specimens of *Listropsylla cerrita* Jordan, 1930, in their account of *L. chelura*. These have been sorted out by Haeselbarth and *L. cerrita juliae* Haeselbarth, 1963, has been added.

In the **Ischnopsyllidae** (7/11) *Lagaropsylla anciauxi* Smit, 1957, and *L. hoogstraali* Smit, 1957, have been added.

The largest family, the **Pulicidae** (8/48) also contains the most changes. In 1961 *Echidnophaga inexpectata* Smit, 1950, was known from wart-hogs in Kenya, but was extralimital to the coverage of DeMeillon et al. It was not until 1962 that the genus *Neotunga* was erected by Smit for a subdermal parasite of the pangolin, *Manis temmincki,* collected in Zimbabwe. The nominate species was *N. euloidea* Smit, and it was not until later that Smit & Wright, 1978, shifted *E. inexpectata* to the genus *Neotunga* without further comment. Here the matter remained until a number of specimens tentatively identified as *N. inexpectata* were taken from warthogs by Horak and associates in Zimbabwe, Botswana, Natal and Kruger National Park. Critical examination of these speci-mens suggested that they belonged to neither *Echidnophaga* nor *Neotun-ga,* but to an unnamed genus, which was subsequently erected by Beau-cournu & Horak as *Phacopsylla,* in 1994 (J. Afr. Zool. 108: 133). As a result, there are now four species of *Echidnophaga* known from southern Africa: *E. aethops, bradyta, gallin-acea and larina.* Both *Neotunga* and *Phacopsylla* are monotypic, and both are echidnophagan in their phylo-genetic affinities, though the former has the tungoid tendency for some females to become subdermal neo-somes as reproductive adults. Un-fortunately, males of this species are as yet unknown, or at least un-described, and mating behavior cannot be predicted based on the configuration of the male genitalia.

Changes in *Xenopsylla* include the removal of *X. davisi* from the *hirsuta* species group and assigning it and *X. demeilloni* Haselbarth, 1964, to the *davisi* species group (which is not included in the key to the species groups). Specimens assigned to *X. roberti* in DeMeillon et al. (1961), an East African taxon, were assigned to a new species, *X. zumpti* by Haselbarth in 1963, and this and *X. hirsuta multisetosa* Haeselbarth, 1964, increase the southern African *Xenopsylla* taxa to 31 from the original 29.

By and large, the book is well done and should well serve the ento-mological community for some time to come. The volume seems well indexed and contains a detailed host/flea index. The only two criti-cisms I have pertain to editorial matters, not content, and certainly do not reflect unfavorably on the author. First, the illustrations are interleaved in the text in such a way that most are not adjacent to the

species accounts, and many of them only occupy half of the page, the remain-der of the page being blank. Better integration of the drawings and the text would have made the volume easier to use. Second, while of considerable value, the distribution maps are also scattered through the text, further disrupting the flow of the prose. Better they had been included as an appendix, particularly since they occupy only half of the page, again with the remainder of the page blank. With appropriate reduction, four to six maps could have been printed on a single page while still conveying the same amount of infor-mation.

In fact, these are minor points and this volume represents the res-ults of a century of intense research by dedicated scientists such as the author, Bootha DeMeillon, Tilly Marcus, Fritz K. E. Zumpt, Erasmus Haeselbarth, Felicity Hardy and David H. S. Davis. Through their efforts the flea fauna of southern Africa is as well known as that of Europe or North America, and these scientists are all to be congratulated for the fruits of their labors.

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MISCELLANEA

The 4th International Symposium on Ectoparasites of Pets will be held in Riverside, CA, April 6-8, 1997. Deadline for paper submissions (title and 250 word abstract) is January 3rd. Reservations deadline is Febru-ary 28th. For more information, contact: NHinkle@citrus.ucr.edu or call Judy Leonard (909) 787 5806. Check out the Symposium web page at: http//entmuseum9.ucr.edu/colloq/pets.html.

The Society for Vector Ecology is sponsoring the Second International Congress of Vector Ecology in Orlando, FL, October 19-24, 1997. The Congress will be held at the Holiday Inn International Drive Resort. For further information and registration materials contact Gilbert L. Challet, Secretary-Treasurer, P. O. Box 87, Santa Ana, CA 92702, USA. Phone: (714) 971-2421, Ext. 148, Fax: (714) 971-3940.

Under Break Throughs in Science, Technology and Medicine, the November issue of Discovery Magazine briefly described studies at the Rocky Mountain Laboratories involving the plague bacillus, *Yersinia pestis.* It seems that in order to be effective in blocking the flea digestive system, thus permitting the transmission of plague, the fleas must have genes that code for proteins that bind hemin, the iron-carrying molecule found in blood. Fleas lacking this *hms* locus do not become blocked and feed normally without transmission. Bacteria with this locus not only colonize the flea digestive tract, but also clump in the valve between the foregut and the midgut (the provent-riculus) preventing blood from passing through the gut and causing the flea to engage in increased feeding activity. (See also: **Hinnebusch, et al.**, 1996, Science 273(5273): 367-370.)

The following colleagues have contributed reprints and other bibliographic information since the last newsletter: D. Cyprich, N. F. Darskaya, J.-M. Doby, M. Gomez, J. Greve, C. Hopla, E. Krafsur, K. Larsen, LI K.-c., M. Mei, J. Pinowski & W. Rowley. Thank you for your assistance!

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OBITUARIES

Robert S Traub

26-October-1916 • 21-December-1996

It is with great sadness and a sense of loss that we announce the passing of Dr. Robert Traub after an extended illness. Even though I have known Bob Traub since the early 1950's and am familiar with his many contributions to the fields of medical entomology, arachnology and microbiology, I do not feel capable of summarizing his many accomplishments appropriately. Better this be done by someone who has been a more constatnt colleague and closer friend than has been possible for me at this distance. Instead, I will concentrate on the bare facts of his life and restrict myself to his contributions to the study of the Siphonaptera.

Bob Traub was born in New York City, NY, and died in the Naval Medical Center in Bethesda, MD. He received the Bachelor of Science degree, *cum laude,* in Biology in 1938 from the City College of New York (now City University of New York). He earned the M.S. degree from Cornell University, Ithaca, NY, in 1939 with a major in Medical Entom-ology and a minor in Veterinary Bact-eriology. Later that year he entered the graduate program in Entomology at the University of Illinois at Urbana, IL, but interrupted his studies to join the United States Army in 1942. He returned after the war to receive the Ph.D. from the University of Illinois in 1947 with a major in Medical Entomology and a minor in Helminthology. His dissertation, titled *Siphonaptera from Central America and Mexico, a morph-ological study of the aedeagus, with desc-riptions of new genera and species,* was published by the Field Museum of Natural History in 1950 as Memoire No. 1. However, he remained in the Army and retired in 1962 with the rank of Colonel. He then joined the faculty of the Department of Microbiology of the University of Maryland Medical School as a Professor of Medical Entomology and Research. There he remained for the next 20 years, formally retiring in late 1983. He then assumed the role of Honorary Curator of Siphonaptera at the United States National Museum of Natural History, a position he occupied until 1994.

At the University of Illinois and in the Army, Bob was a part of a generation of young biological scientists who have collectively made as great or greater impact in the fields of Medical Entomology and Acarology than had any generation before them. Most were military service personnel during World War II, and many remained in the military after the end of hostilities. Practically all subsequently pursued advanced degrees in the Biological Sciences, and most retained an appreciation of the basic science of arthropod systematics throughout their career. Bob Traub was preeminent among them.

The bulk of Traub's research activity centered in geographical areas other than North America north of Mexico, and particular emphasis was directed toward southern Mexico, northern Africa, and especially southeast Asia. According to my records, during his career Bob described 30 new genera or subgenera, and 114 new species or subspecies alone. In addition to his work on mites and other medically import-ant arthropods. He authored, co-authored or edited over 200 technical publications, at least 93 of which dealt with fleas or flea literature. He was a member of many professional societies and the recipient of numerous citations, honors and awards, both foreign and domestic.

Bob was a great fighter who bore the burden of physical afflictions stoically, always maintaining his unique sense of humor in spite of them. His body has been cremated and the ashes are to be interred at Arlington Memorial Cemetary. A memorial service is planned for January 11th at the Cedar Lane Unitarian Church in Bethesda. He will be sorely missed by the scientific community, as well as by his many friends and colleagues.

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Aviostivalius Traub, 1980
Bibikovana Traub, 1980
Coronapsylla Traub & Dunnet, 1973
(Destivalius) Traub, 1980
(Eremedosa) Traub, 1965
Evansipsylla Traub, 1968
=Genoneopsylla Wu, Wu & Liu, 1966
Farhangia Traub, 1980
Gryphopsylla Traub, 1957
Hollandipsylla Traub, 1953
Hoogstraalia Traub, 1951
Hopkinsipsylla Traub, 1963
Jellisonia Traub, 1944
Johnsonaeopsylla Traub, 1952
=Cratynius Jordan, 1933
Jordanopsylla Traub & Tipton, 1951
Kohlsia Traub, 1950
Lentistivalius Traub, 1972
Medwayella Traub, 1972
Migrastivalius Traub, 1980
=Gryphopsylla Traub, 1957
Muesebeckella Traub, 1969
Nestivalius Traub, 1980
(Penicus) Traub, 1963
Sigmactenus Traub, 1950
Smitella Traub, 1968
Strepsylla Traub, 1950
Syngenopsyllus Traub, 1950
Tiflovia Traub, 1977
Wenzella Traub, 1953

Species & Subspecies erected by Traub

1944

Jellisonia klotzi Traub
Epitedia stanfordi Traub
Peromyscopsylla duma Traub
=Peromyscopsylla selenis (Rothschild)
Corrodopsylla hamiltoni (Traub)

1947

Opisodasys hollandi Traub

1950

Jellisonia hayesi hayesi Traub
Jellisonia hayesi breviloba Traub
Jellisonia dybasi Traub
Plusaetis mathesoni (Traub)
Plusaetia parus (Traub)
Plusaetia equatoris asetus (Traub)
Plusaetis vermiformis (Traub)
Pleochaetis paramundus Traub
Baculomeris schmidti (Traub)
Kohlsia osgoodi Traub
Kohlsia graphis erana Traub
Kohlsia gammonsi Traub
Kohlsia uniseta Traub

Kohlsia cora Traub
Foxella hoogstraali Traub
Orchopeas fulleri Traub
Polygenis adocetus Traub
Ctenophthalmus haagi Traub
Ctenophthalmus expansus Traub
Ctenophthalmus sanborni Traub
Ctenophthalmus p. micropus Traub
Strepsylla mina Traub
Strepsylla fautini Traub
Corrodopsylla c. lira Traub
Pulex sinoculus Traub
Lentistivalius insolli (Traub)
Macrostylophora h. malayensis Traub
Macrostylophora h. nepali Traub
Acropsylla girshami Traub
Hectopsylla knighti Traub & Gammons
Rhynchopsyllus megastigmatus T. & G.
=Rhynchopsyllus pulex Haller
Sigmactenus werneri Traub

1951

Hoogstraalia turdella Traub
Nestivalius pomerantzi Traub
Stivalius ralius Traub
=Nestivalius pomerantzi Traub
Thaumapsylla longiforceps Traub
Meringis altipectin Traub & Hoff
Myodopsylla nordina Traub & Hoff
Jordanopsylla allredi Traub & Tipton

1952

Agastopsylla pearsoni Traub
Agastopsylla nylota Traub
Agastopsylla hirsutior Traub
Polygenis ambersoni Traub
=Polygenis dunni J. & R.
Kohlsia whartoni Traub & Johnson
Stenoponia ponera Traub & Johnson
Atyphloceras tancitari Traub & Johnson
Jellisonia bonia Traub & Johnson
Cratynius audyi (Traub)
Strepsylla davisae Traub & Johnson
Strepsylla taluna Traub & Johnson
Hystrichopsylla kris Traub & Johnson
Eumolpianus polumus (Traub & Johnson)

1953

Wenzella obscura Traub
Hollandipsylla neali Traub

1954

Sigmactenus alticola Traub
Neopsylla luma Traub
Araeopsylla wassifi Traub
Araeopsylla elbeli Traub
Peromyscopsylla h. cuneata Johnson & T.

1955

Strepsylla dalmati Traub & Barrera
Strepsylla schmidti Traub & Barrera
Strepsylla villai Traub & Barrera
Cratynius crypticus Hopkins & Traub

1957

Rothschildiana smiti Traub
Epitedia cavernicola Traub
Gryphopsylla hopkinsi Traub
Bibikovana tiptoni (Traub)

1963

Hopkinsipsylla occulta Traub
Nosopsyllus geneatus Traub
Nosopsyllus l. declivus Traub
Ctenophthalmus hoogstraali Traub
Ctenophthalmus tholatus Traub

1965

Ophthalmopsylla celata Traub
Hopkinsipsylla o. praeceps Traub

1966

Ctenophthalmus cryptotis Traub & Barrera
Ctenophthalmus myodosus Traub & Barrera

1967

Phalacropsylla nivalis Barrera & Traub
Mesopsylla t. propinacta Traub & Evans
Ophthalmopsylla v. impersia T. & E.
Palaeopsylla recava Traub & Evans
Palaeopsylla apsidata Traub & Evans
Palaeopsylla setzeri Traub & Evans
Palaeopsylla r. nesicola Traub & Evans
=Palaeopsylla remota Jordan
Doratopsylla wissemani Traub & Evans
Corrodopsylla barrerai Traub & Evans

1968

Smitella thambetosa Traub
Evansipsylla thysanota Traub
=Genoneopsylla longisetosa W.W. & L.

1969

Muesebeckella mannae Traub
Muesebeckella nadi Traub

1972

Medwayella dryadosa Traub
Medwayella arcuata Traub
Medwayella angustata Traub
Medwayella r. peregrinata Traub
Medwayella r. bogora Traub
Medwayella r. tiomanica Traub
Medwayella p. phangi Traub
Medwayella p. tana Traub
Medwayella limi Traub
Medwayella thurmani Traub
Medwayella calcarata Traub
Medwayella batibacula Traub
Medwayella veruta Traub
Lentistivalius vomerus Traub
Stivalius c. bamus Traub

1973

Stephancircus harrisoni Traub & Dunnet
Stephanocircus g. greeni Traub & Dunnet
Stephanocircus g. tasmanica T. & D.
Stephanocircus domrowi Traub & Dunnet

1977

Tiflovia pachnopoata Traub

Tiflovia stellalpestris Traub

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Dorald Mervin Allred

11-July-1923 • 20-June-1996

Dorald Allred was born in Lehi, Utah, and died in Provo, Utah. He earned the B.A. in 1950 and the M.A. in 1951 from Brigham Young University at Provo. He was a Ranger-Naturalist at Arches National Park in 1950, and went on to receive the PhD. in Entomology and Parasitology from the University of Utah in Salt Lake City in 1954. From 1954 to 1956 he was Associate Ecologist and Chief of Entomology and Arachnology at Dugway Proving Ground in western Utah. He joined the faculty of Brigham Young University in 1956, where he remained until retirement. From 1982 to 1987 he was Dir-ector of the Monte L. Bean Life Science Museum at Brigham Young University. He retired as Professor of Zoology in September of 1987 and he and his wife, Berna, remained in Provo.

Dr. Allred's interests were in the parasitic acari, parasitology and medical entomology and arthropod ecology. One of his students, Michael Hastriter, said of Dr. Allred, "... I had him in several classes ... He was one of the true naturalists of our day. He was detailed in collecting ecological information and always encouraged his students to take time for scientific observations. From my perspective as a student some 25 years ago, he was a great teacher and [an] example of goodness." He was co-author of one North American species of flea: *Megarthroglossus becki* Tipton & Allred.

Information included here was derived from *American Men and Women in Sci-ence,* 17th Edition, Volume 1: 93, (1989-90), plus information provided by Dr. & Mrs. Allred and Michael Hastriter.

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Though it may not be obvious from the titles, citations included here pertain to fleas and the zoonoses associated with them. No particular effort has been made to search the medical and veterinary literature and the emphasis here is on the taxon-omy, systematics and general biology of members of the order.

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It should be understood that all Russian and Chinese citations listed here are in Russian or Chinese, although they may have summaries or abstracts in English or some other language. Additional information is available upon request (including e-mail) and recipients are urged to report citations of articles on Siph-onaptera, particularly those pub-lished in rare

sources or those in journals peripheral to the field of Entomology.

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Use of an orally administered insect development inhibitor (Lufenuron) as a flea control agent in the California ground squirrel, *Spermophilus bee-cheyi*.

Dr. Richard M. Davis, Public Health Biologist, Vector-Borne Disease Section, California Department of Heath Services, Ventura, CA, published the following account in the latest Vector Ecology Newsletter 27(3): 14.

"The presence of plague in a population of susceptible rodents closely associated with human activity has generally necessitated intervention with insecticides to reduce the number of potentially infective vector fleas to lessen the transmission risk to humans. In many instances, temporary closure of recreational facilities for plague control oc-cured, therefore resulting in not only an unpopular situation, but one with potential major economic implications to the camp-ground and the tourist economy of the area. In addition to those potential economic imp-acts, the costs directly attributable to flea suppression are also significant when all of the time, material and labor costs are con-sidered

"Lufenuron, a new insect development inhibitor (IDI) recently introduced by Ciba Animal Health [**Note:** Ciba and Sandoz are now merged] as **Program**® for dogs and cats and marked as a once-a-month oral treatment, has become extremely effective in controlling the cat flea. As an IDI, lufenuron does not kill adult fleas, but effectively and safely controls flea populations through a mode of action which breaks the flea's life cycle, primarily at the egg stage, by interfering with the deposition of chitin. As a result, a project was devised to determine the effectiveness of lufenuron in flea control in a population of California ground squirrels, *Spermophilus beecheyi*, in a campground environment. The project is based upon the following goals: (1) to reduce the use of insecticides in flea control, (2) to significantly reduce the costs of traditional flea control, and (3) to incorporate a simple, routine, and easy-to-use flea control supression program into plague endemic recreational areas.

"Field observations and lufenuron blood analysis of *S. beecheyi* have shown that a newly developed bait cube was an effective means of supplying an oral dose. Lufenuron levels and flea control results have been somewhat mixed in the early stages of the study, but an improving trend appears to be evident. Results to date and the potential of lufenuron, or other similar types of IDI's, as simple, routine, and easy-to-use flea control agents in plague endemic recreational areas will be discussed at the upcoming annual SOVE meeting in October."

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BEST WISHES FOR THE HOLIDAY SEASON AND THE NEW YEAR