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The American Society of Parasitologists

Newsletter

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William C. Campbell, Winner of the Nobel Prize

From the *Editor*

As you have seen in the past, we have included interesting and, sometimes, controversial non peer-reviewed white papers in the *ASP Newsletter*. Send me a link to your favorite lecture on parasites or consider providing an actual parasite lecture. Your contribution is valuable and anything sent in to me will be considered for publication. There are only a very few items that I have rejected over the years.

Sincerely,

SLG - editor

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Janice Moore recognized for pioneering parasitology, animal behavior work

Janice is a long-time ASP member and avid proponent of behavioral aspects of parasites and parasitology. The notice of this award was forwarded to me by Donald W. Duszynski, Janice's Ph.D. supervisor at the University of New Mexico.

The Animal Behavior Society has announced that Janice Moore, professor of biology in the College of Natural Sciences, has received the society's 2016 **Exemplar Award** for her "long-term contribution in animal behavior."

Janice's lab explores the ecology and evolution of parasitic worms. These parasites can alter the behaviors of hosts in ways that at times enhance the transmission of the parasite; in other cases, host behavioral changes are part of host defenses against the parasite.

Forging a new field

Janice Moore was among the first scientists to investigate the influence of such parasites and pathogens on behavior. In 2002, she published a book with Oxford University Press, *Parasites and the Behavior of Animals,* to address a persistent knowledge gap in how parasites, animal behavior and ecology intersect.

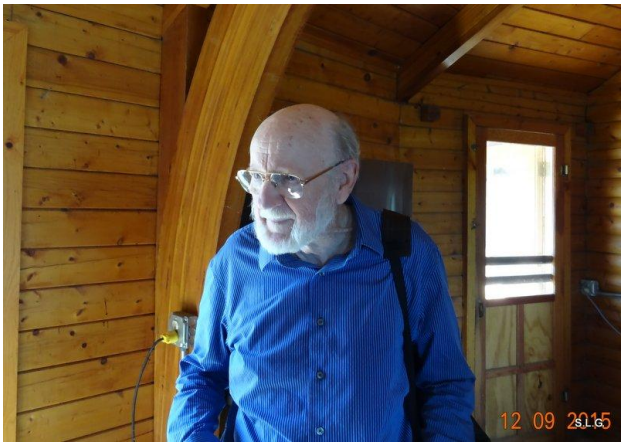
As a testament to how unusual her work was at the time, Moore enrolled in not one, but two Ph.D. programs before she found a third, in the lab of Donald Duszynski (CSU M.S. '68 zoology, Ph.D. '70 zoology) at the University of New Mexico, that allowed her to pursue her interests. She received her Ph.D. in 1981. The field of disease ecology/evolution is now "much more fashionable," Moore says.

In addition to numerous scientific papers, Moore has co-authored a textbook, *Animal Behavior*, published by Academic Press of Elsevier, now in its second edition. She was also co-executive editor of *The Encyclopedia of Animal Behavior,* also published by Elsevier.

Janice will be honored at the Animal Behavior Society annual meeting, July 30-Aug. 3, 2016.

(This was modified from the Feb 28 issue of the "Source" from Colorado State University – Ed.)

William Campbell is Awarded the Nobel Prize – 2015

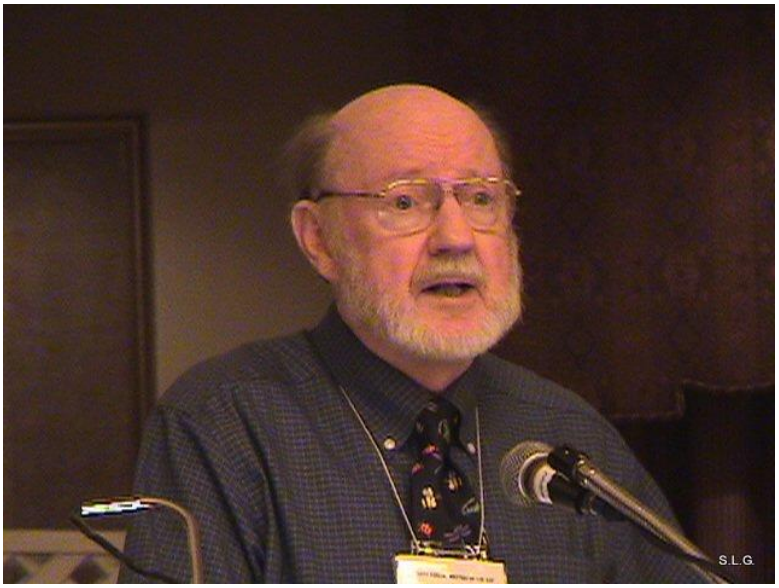


Bill at Cedar Point Biological Station talking to students in Goodall Lodge during the fall 2015 RMCP meeting.

Something like "You must be joking" is the first thing that Bill Campbell told the committee person who called him on an early morning last fall. After a while it became clear that the person was not kidding and that the Nobel Prize was indeed being awarded to Bill and Sitoshi Ohmura, a colleague from Japan who had sent him the bacteria. From the HWML web site:

Bill at Cedar Point chatting with Matt Bolek while we were looking for pocket gopher sign on the Cedar Point Biological Station grounds.

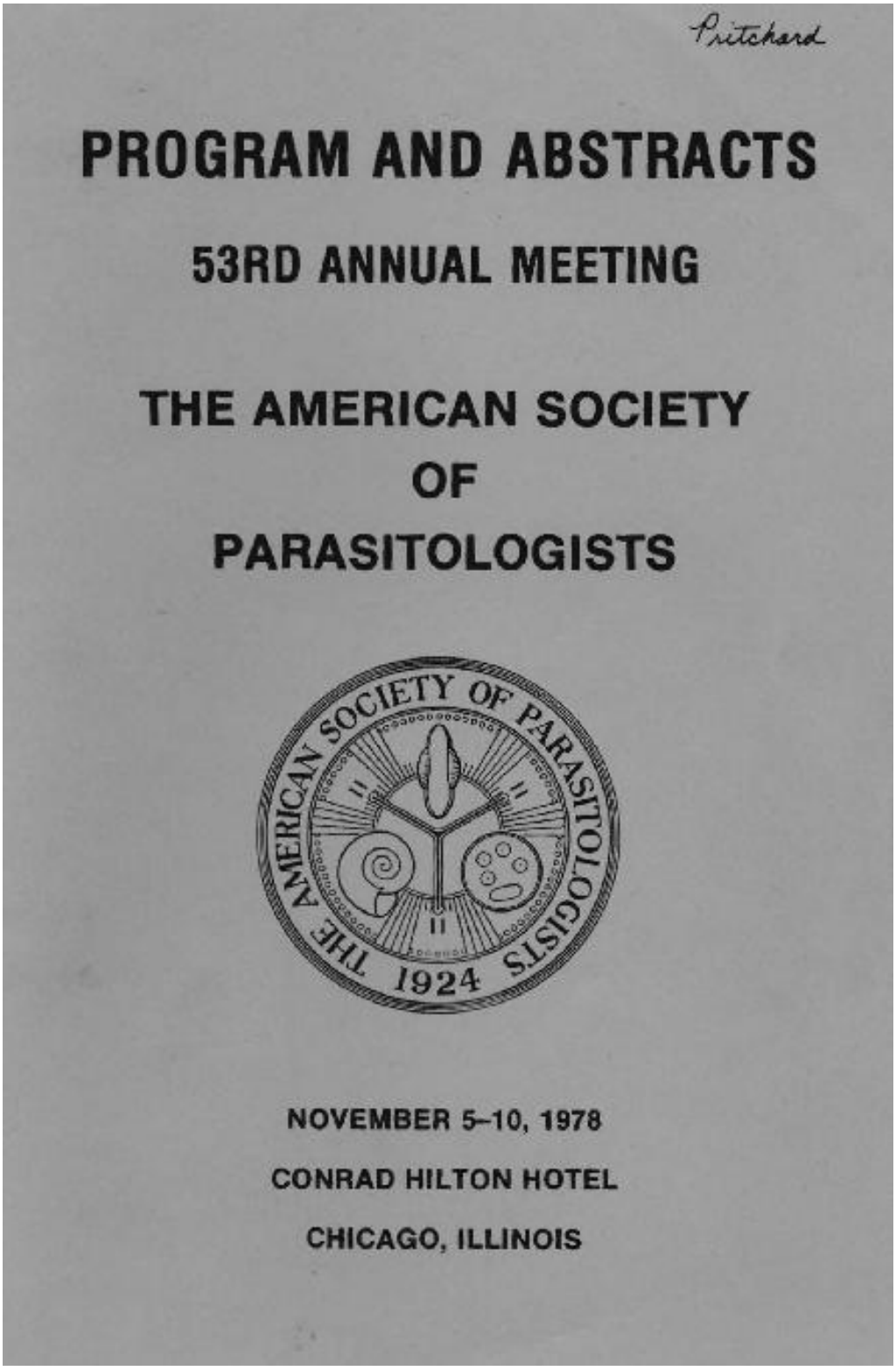
Congratulations to Dr. William C. Campbell, joint winner of the Nobel Prize in Physiology or Medicine for 2015. While working at Merck & Company, Bill was initially hired at Merck by Ashton Cuckler (a UNL graduate in parasitology and who worked with H.W. Manter), Dr. Campbell focussed a part of his time on the development of the anti-nematode drug Avermectin. Ivermectin was developed further from this isolate from soil bacteria initially discovered on a golf course, isolated, and grown by Sitoshi Ohmura (co-winner of the prize), at Kitasato University (Japan). The drug was subsequently distributed free to countries that wanted it, by Merck & Company, to treat the filarioid nematodes that cause river blindness and lymphatic filariasis. Ivermectin is now recognized as one of the



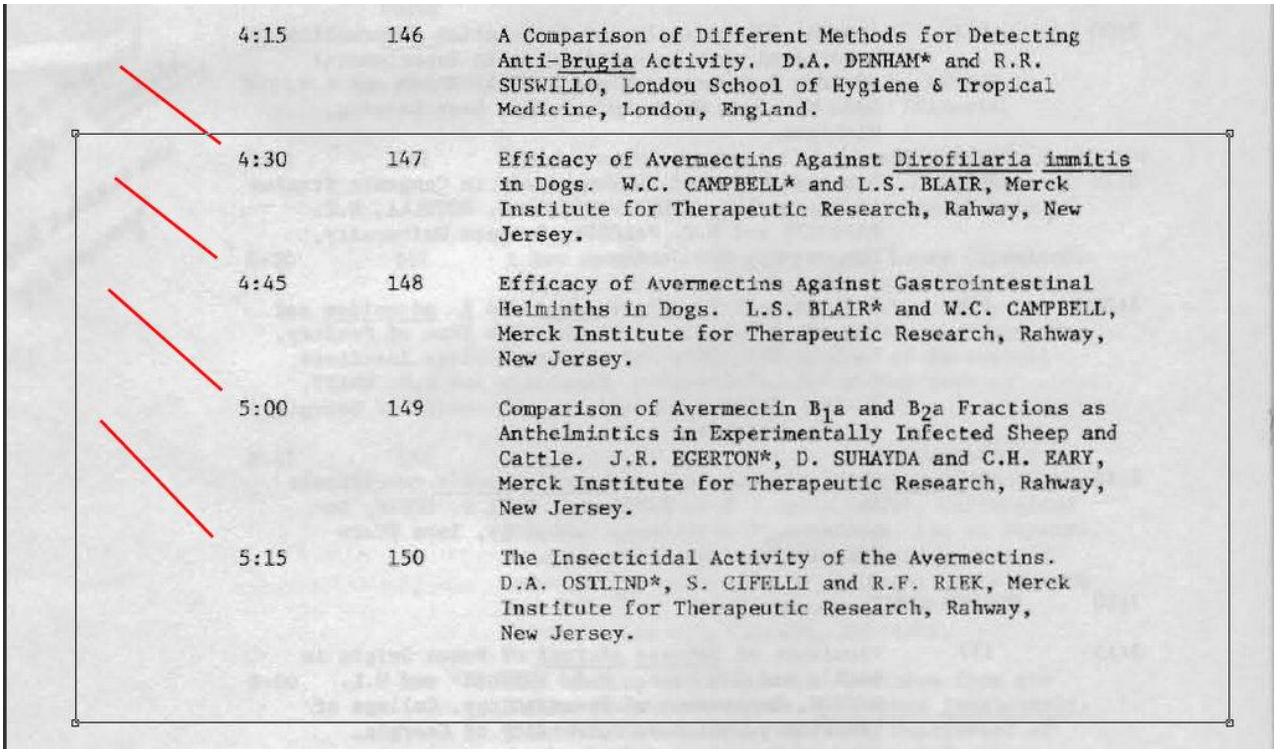
Bill giving a speech at the annual meeting of the ASP in Nova Scotia, 2003.

world's most important animal and human medicines ever produced, one of the foremost public health interventions ever in the developing world, and seen to rival penicillin for its beneficial impact on global health - with over 300 million people using the compound annually.

Bill Campbell during his evening speech at the ASP meeting in Halifax, Nova Scotia in 2003.



ASP Meeting Where Bill Presented His Work on Avermectin



4:15	146	A Comparison of Different Methods for Detecting Anti-Brugia Activity. D.A. DENHAM* and R.R. SUSWILLO, Londou School of Hygiene & Tropical Medicine, Londou, England.
4:30	147	Efficacy of Avermectins Against Dirofilaria immitis in Dogs. W.C. CAMPBELL* and L.S. BLAIR, Merck Institute for Therapeutic Research, Rahway, New Jersey.
4:45	148	Efficacy of Avermectins Against Gastrointestinal Helminths in Dogs. L.S. BLAIR* and W.C. CAMPBELL, Merck Institute for Therapeutic Research, Rahway, New Jersey.
5:00	149	Comparison of Avermectin B_{1a} and B_{2a} Fractions as Anthelmintics in Experimentally Infected Sheep and Cattle. J.R. EGERTON*, D. SUHAYDA and C.H. EARY, Merck Institute for Therapeutic Research, Rahway, New Jersey.
5:15	150	The Insecticidal Activity of the Avermectins. D.A. OSTLIND*, S. CIFELLI and R.F. RIEK, Merck Institute for Therapeutic Research, Rahway, New Jersey.

Papers where Avermectin were presented by Bill and colleagues. From Page 23 of the program and abstracts, 1978.

Bill will attend the Annual Meeting in Edmonton this coming summer!

Annual Meeting – 2016. Plan Now for Edmonton, Alberta, Canada

Submitted by Allen Shostak (Local Organizing Committee Chair for the 2016 meeting)

Edmonton skyline in the evening.

The 91st Annual Meeting of the American Society of Parasitologists will be held July 11-14, 2016, at the Westin Edmonton, an AAA 4-diamond-rated hotel at 101 Ave and 100 St in the city center of Edmonton, Alberta, Canada. All conference activities will occur at the Westin, with the exception of a planned evening at the Muttart Conservatory. The conservatory has 4 pyramids, 3 representing major biomes (desert, temperate, and tropical) and 1 that has seasonal exhibits. We will have exclusive access to the conservatory, and a catered dinner.

Located on the North Saskatchewan River, between prairie and farmlands to the south and the boreal forest of the north, the area was first settled by Europeans in about 1795, although the early settlement history of the area is still hotly debated. Eventually, Fort Edmonton became a fur trading hub. A series of forts was built on the flats north of the river, below what is now the downtown area. The railway arrived on the south side of the river in 1891, where the community of Strathcona developed. Edmonton was chosen as the capital city of Alberta when the province formed in 1905, and Edmonton and Strathcona amalgamated in 1912. Although Edmonton has a history of booms and busts, the city today is the hub of a diversified regional economy, including agriculture, education, manufacturing, technology, the petrochemical industry, and government services. It is also a major service centre for aviation, forestry, mining and petroleum in the north, and has earned as 1 of its nicknames, "Gateway to the North". The Edmonton of 2015 is a multicultural city with a population of about 1 million, and is the northernmost large city in North America.

Edmonton will be a great place to bring your family, with sights and activities to appeal to everyone. Within easy walking distance of the Westin you will find numerous restaurants, bars, cinemas and shops, the Art Gallery of Alberta, the Winspear Concert Hall, the Citadel Theater and the Edmonton Public Library. A longer walk, or a short bus ride, gets you to the Provincial Legislature building, the 124th Street gallery and boutique area, and the river valley trail system. By bus or car you can go to Old Strathcona area (popular for its bars, restaurants and eclectic shops), West Edmonton Mall (with its water park and indoor amusement center), Fort Edmonton Park, the John Janzen Nature Center, Rutherford House Provincial Historic Site, the Valley Zoo, the Alberta Aviation Museum, the Telus World of Science, and Edmonton Northlands (thoroughbred or standard bred horse racing). Interesting day trips around Edmonton include the Devonian Botanical Gardens, Elk Island National Park, and the Ukrainian Cultural Heritage Village. Edmonton also has a string of festivals throughout the summer, such as the Edmonton Street Performers' Festival and A Taste of Edmonton that usually occur around the dates of the ASP meeting. National Geographic Magazine has listed Edmonton as one of its top 10 word travel destinations for summer 2015!

If you want to plan a pre- or post-meeting trip, and have a vehicle, Edmonton is within a day's drive of several UNESCO World Heritage Sites, such as Banff and Jasper National Parks, and Waterton-Glacier International Peace Park, in the Rocky Mountains to the west, Head-Smashed-In-Buffalo Jump and Dinosaur Provincial Park to the south, and Wood Buffalo National Park to the north. Alberta's other major city, Calgary, is also just a few hours south of Edmonton, and many will likely make their air connections to Edmonton through there. Although most Edmontonians will not admit it, Calgary is also worth a visit.

Edmonton is easily accessible by air, not only with non-stop connections to major cities across Canada, but also to Chicago, Dallas, Denver, Houston, Minneapolis, Los Angeles, Seattle and other US cities, as well as several international destinations. There is convenient access from the airport to downtown by bus, shuttle, or taxi. Once at the conference, people will find numerous dining, shopping and sightseeing options within easy walking distance of the hotel. For exploration a bit further afield, Edmonton has a well-developed and inexpensive public transit system, with much of the city accessible via a convenient light rail transit system that stops right next to the Westin, as well as bus service to other areas.

Edmonton in July is usually quite pleasant, with average min/max temperatures about 12C/ 23C and rainfall usually occasional and light. We are one of the sunniest places in Canada, and in July expect >16 hr daylight plus a lengthy dusk and dawn.

Judith out chasing an elusive species of bird.

Judith Humphrey Shaw

Long-time ASP member Judith Humphrey Shaw died on November 23, 2015 in Anne Arundel Medical Center, Annapolis, MD. She was eighty-nine years-old. The cause of death was complications from diabetes. She had been a resident, from May 2003, of Collington Life Care Community in Mitchellville, MD.

She was born on July 19, 1926 in New Haven, CT to Eugene Hall Humphrey and Mabel Woodcock Humphrey. She attended the schools in Hamden and went on to the University of Connecticut, from which she graduated in 1948.

She worked for thirty-seven years in the U.S. Department of Agriculture on the *Index-Catalogue of Medical and Veterinary Zoology*. In her job she combined her love of research, classification, and languages. Specializing in parasitology, she travelled to conferences in many parts of the world, where she also took days of vacation for bird-watching, an avid hobby. In 1991, she established the Judith Humphrey Shaw Parasitology Fund at her alma mater. It has enabled more than two hundred students to do field work and to travel to national and international conferences and workshops.

Her energy of mind and enthusiasm for life took many forms. She was a systematic genealogist of her family, on both her mother's and her father's sides. She was a competent recorder player and loved music, especially as played on the pipe organ. She became interested in historical organs in American churches, and it was as a member of the Organ Historical Society that she met James Walker Shaw. They were married in 1973 and lived in Silver Spring MD. He died in 2001. At Collington she took classes in drawing and water colors and pursued this new hobby on vacations for as long as she was able to travel.

She was also a member of the Helmithological Society of Washington, the American Society of Parasitologists, and the Maryland Ornithological Society.

She is survived by thirteen nieces and nephews. She took a great, affectionate interest in them and they looked to her, the last of her generation on the Humphrey side, as the center of their extended family.

Two memorial services were held in the Walker Interfaith Chapel at Collington Episcopal Life Care Community, 10450 Lottsford Road, Mitchellville, MD 20721 at 2:30 p.m. on Saturday, January 2, 2016. The second was held at University United Methodist Church College Park, MD, 3621 Campus Drive, College Park, Maryland 20740 at 1:30 p.m.

Donations may be sent to the Chesapeake Bay Foundation at the Philip Merrill Environmental Center, 6 Herndon Avenue, Annapolis, MD 21403 or the Maryland Ornithological Society, Cylburn Mansion, 4915 Greenspring Avenue, Baltimore, MD 21209 or The Collington Foundation, 10450 Lottsford Road, Mitchellville, MD 20721.

This obituary was sent to me by Lowell Edmunds of Highland Park, NJ, nephew of the late Judith Shaw. Many parasitologists sincerely appreciate the work Judith did on the Index Catalog (Ed.).

News from the Harold W. Manter Laboratory of Parasitology

Don in the Manter Lab, trying to get some work done.

(By Don Gettinger, Ph.D., Senior Research Fellow - Ectoparasites, HWML).

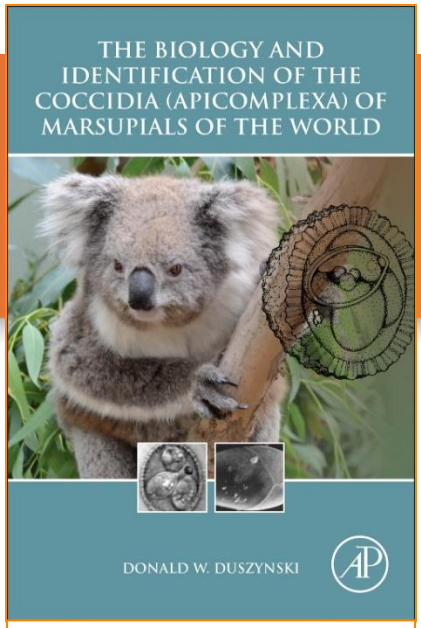
In the last few years, I have worked as a volunteer at the Harold W. Manter Laboratory of Parasitology, depositing my personal specimens of mammalian ectoparasites from the United States, Mexico and Brazil into our research collection. These accessions have greatly increased the size and value of our specimen-base of these important arthropods. When the noted parasitologist Nixon A. Wilson (who worked most of his career at University of Northern Iowa in Cedar Falls, Iowa) passed away in 2011, he left his professional library and very large synoptic research collection to the HWML, including both fully identified slides (in various mounting media) and vials of specimens in alcohol. Dr. Wilson was a central figure in an international group of entomologists with broad expertise in the taxonomy of ectoparasitic arthropods associated with vertebrates. During his long and productive career, he published on a wide variety of medically important arthropods, including both insects (fleas, lice, bugs) and arachnids (ticks and mites) and maintained voucher specimens of this research in his personal collections.

All of this material will be fully accessioned and searchable online by the end of the year, greatly increasing our arthropod holdings, and making the HWML a significant source of specimen-based data on the ectoparasitic arthropods that plague man and his domestic animals, as well as contributing to our mission to both combat parasitic disease and preserve global biodiversity. Once all specimens are cataloged in our online database "Arctos" they will be available for study via both loan and on-site in the Manter Laboratory.

A partial list of type specimens recovered from the Nixon Wilson collection includes: *Parapsyllus laysanensis* Wilson, 1972; *Polygenis delpontei* Mendez, 1977; *Macronyssus meridionalis* Radovsky, 1967; *Ptilonyssus serini* Fain, 1956; *Ptilonyssus morofskyi* Hyland, 1962; *Mackiena migratoria* Nadchatram & Wilson, 1969; *Pteracarus completus* Dusbabek & Wilson, 1973; *Pteracarus minutus daubentonii*, Dusbabek & Wilson, 1973; *Pteracarus minutus occidentalis* Dusbabek & Wilson, 1973; *Pteracarus robustus*

Dusbabek & Wilson, 1973; *Radfordia eliomys* Fain & Lukoschus,1973; *Ugandobia procera* Dusbabek & Lukoschus, 1971; *Radfordia eliomys* Fain & Lukoschus, 1973; *Atopomelus talpae* Lukoschus & Cauwenberghe, 1973; *Echimyopus dasypus* Fain, Louppen, Lukoschus & Mendez, 1973; *Orycteroxenus canadensis* Fain, Kok, Lukoschus & Clulow, 1971; *Dermacarus reticulosus* Spicka & Gerrits, 1977; *Dermacarus lorentzimysi* Rupes, Yunker & Wilson, 1971; *Ursicoptes procyoni* Fain & Wilson, 1979; *Pteracarus completus vrazi* Dusbabek & Wilson, 1973; *Marsupialichus marmosae* de Cock, Fain, Mendez & Lukoschus, 1975. (Reading these authority names is an amazing nostalgia trip, as I first met Don G. and many of the people listed in the authorities of these ectoparasites, in the lab of Gerry Krantz, at Oregon State University in the late 1970's – Ed.).

Don G. at the UOBS field station attending the annual Southwestern Association of Parasitologists Meeting in 2006.



The Biology and Identification of the Coccidia (Apicomplexa) of Marsupials of the World

Donald W. Duszynski Department of Biology, University of New Mexico, Albuquerque, NM, USA

This book is the first and only taxonomic summation of apicomplexan parasites of marsupials that allows easy parasite identification with a summation of virtually everything now known about the biology of each Apicomplexan parasite species, including *Eimeria*, *Isospora*, *Klossiella*, *Sarcocystis*, *Toxoplasma*, *Tyzzeria*, and *Cryptosporidium* species.

ISBN: 978-0-12-802709-7

PUB DATE: October 2015

LIST PRICE: $99.95

FORMAT: Hardback

PAGES: c. 242

TRIM: 7.5w x 9.25h

AUDIENCE

Researchers in biology, parasitology, veterinary parasitology, animal husbandry, diseases of wild and domestic animals, veterinary medicine, faculty members in universities with graduate programs in these areas, colleges of veterinary medicine and agriculture, practicing veterinarians, farmers, students and other individuals involved in 4-H (4-H is a youth organization administered by the National Institute of Food and Agriculture of the United States Department of Agriculture).

KEY FEATURES

- Offers line drawings, photomicrographs, and detailed descriptions of each parasite from each host species, including methods of identification, other known hosts, localities, life history information (if known), pathology, and any ultrastructural or molecular information now available.
- Presents a complete historical rendition of virtually all known publications on coccidia (and their closest relatives) from all marsupial species on Earth, and evaluates the scientific and scholarly merit of each.
- Provides a complete species analysis of the known biology of every coccidian described from marsupials.
- Reviews the most current taxonomy of marsupials and their phylogenetic relationships needed to help assess host-specificity and evaluate what little cross-transmission work is available.

DESCRIPTION

The Biology and Identification of the Coccidia (Apicomplexa) of Marsupials of the World contains the most up-to-date information on the former order Marsupialia that is now partitioned by mammalogists into seven separate orders consisting of 20 families, 86 genera, and 318 species that live on land or in trees in Oceania and the Americas.

Marsupials, like other vertebrate animals, have many different kinds of parasites (e.g. viruses, protozoa, worms, arthropods, etc.), but there is no definitive text that covers any one of these groups found in all marsupials prior to this contribution on the Apicomplexans.

Coccidiosis is a serious global problem in most domesticated animals, and under increasing circumstances of loss of habitat and crowding, may also affect some wild animal populations; thus, there is a real need for their identification and control.

Visit store.elsevier.com/9780128027097

How to reference parasite specimens of the NMNH Invertebrate Zoology Collection: alleviating confusion between the acronyms NMNH, USNM and USNPC

Many questions have been raised about how to reference parasite specimens at the National Museum of Natural History (NMNH) in publications. This is understandable because the acronym preceding catalog numbers of specimens in the National Invertebrate Zoology Collection is different than the acronym of the museum.

Specimens in the National Invertebrate Zoology Collection of the National Museum of Natural History are given catalog numbers preceded by 'USNM' (example: USNM 12345 *Coelopleurus floridanus*). The acronym 'USNM' dates back to when the institution was known as the United States National Museum. Today, the Smithsonian Institution includes 19 museums and galleries, including the National Air & Space Museum, National Museum of the American Indian, the National Portrait Gallery, and the National Museum of Natural History to name a few. For more on the history of the Smithsonian Institution, please visit the online exhibits at the Smithsonian Archives (http://siarchives.si.edu/history/exhibits). The acronym of the National Museum of Natural History is 'NMNH' and should be used when referring to the museum itself (i.e. the institution housing the National Invertebrate Zoology Collection).

The US National Parasite Collection (USNPC) was transferred to the NMNH on 2 June, 2014 (see http://invertebrates.si.edu/parasites.htm). Specimens deposited in the USNPC prior to June 2014 are being assigned new USNM catalog numbers while retaining the USNPC accession (catalog) numbers in each specimen record. It is anticipated that the assignment of USNM catalog numbers to these legacy USNPC specimens will be completed within the next month. These legacy specimens of the USNPC will be searchable in the Invertebrate Zoology Collections database (see http://collections.nmnh.si.edu/search/iz/) by USNPC accession (catalog) number *and/or* USNM catalog number(s) going forward. A compendium of the information for type specimens of the USNPC including the USNPC accession (catalog) numbers and new USNM catalog numbers will be produced in the coming year. When referencing these specimens in future publications, authors may provide either the USNPC or USNM catalog numbers for these legacy specimens now in the Invertebrate Zoology Collection at the NMNH.

Parasite specimens donated to the NMNH Invertebrate Zoology Collection after June 2014 have 'USNM' preceding the catalog number and *will not be* assigned a USNPC accession (catalog) number. When referencing these specimens in future publications, authors should provide the USNM catalog number.

We hope this clarifies when to use the acronyms NMNH, USNM, and USNPC. If you have questions as to how to reference specimens of the USNPC or NMNH, we encourage you to contact one of us for clarification.

Contributed by: Anna J. Phillips (NMNH; phillipsaj@si.edu), William E. Moser (moserw@si.edu), and Eric P. Hoberg (USDA-ARS; eric.hoberg@ars.usda.gov)

Note to Members -
The ASP Newsletter welcomes news stories, articles, poetry, photographs, etc. Please send your text electronically to the editor as an e-mail and attach as an MS Word document. Drawings, photographs, charts, or tables can be sent as B/W TIF files at 300 dpi.
Thanks: slg@unl.edu

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