

Professor Emeritus James W. Amrine Jr.: advancing the study of *Varroa destructor* and eriophyoid mites for over 30 years

Authors: Sarratt, Jacqueline V., Zhao, Shifu, and Ochoa, Ronald

Source: Systematic and Applied Acarology, 27(6) : 1207-1218

Published By: Systematic and Applied Acarology Society

URL: <https://doi.org/10.11158/saa.27.6.17>

The BioOne Digital Library (<https://bioone.org/>) provides worldwide distribution for more than 580 journals and eBooks from BioOne's community of over 150 nonprofit societies, research institutions, and university presses in the biological, ecological, and environmental sciences. The BioOne Digital Library encompasses the flagship aggregation BioOne Complete (<https://bioone.org/subscribe>), the BioOne Complete Archive (<https://bioone.org/archive>), and the BioOne eBooks program offerings ESA eBook Collection (<https://bioone.org/esa-ebooks>) and CSIRO Publishing BioSelect Collection (<https://bioone.org/csiro-ebooks>).

Your use of this PDF, the BioOne Digital Library, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Digital Library content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne is an innovative nonprofit that sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Biography

Professor Emeritus James W. Amrine Jr.: advancing the study of *Varroa destructor* and eriophyoid mites for over 30 years

JACQUELINE V. SARRATT^{1,4}, SHIFU ZHAO² & RONALD OCHOA³

¹ San Francisco State University, 1600 Holloway Ave., San Francisco, CA 94132-4033, USA; ORCID: 0000-0002-0664-0565.

² West Virginia University, 4100 Agricultural Sciences Building, PO Box 6108, Morgantown, WV 26506-6108, USA.

³ United States Department of Agriculture, Systematic Entomology Laboratory, Agricultural Research Service, BARC-West, 10300 Baltimore Ave, Bldg 005, Room 137, Beltsville, MD, 20705-2350, USA; ORCID: 0000-0003-1680-3601.

⁴ corresponding author: jsarratt1@mail.sfsu.edu

Keywords: Acari, acarologist, biography, IPM, rose rosette disease



As the world's foremost taxonomist of eriophyoid mites (Eriophyoidea, Acariformes) (Xue *et al.* 2017), Dr. James (Jim) Wesley Amrine Jr.'s name is nearly synonymous with the group. His experiments with *Phyllocoptes fructiphilus* (Eriophyidae) as well as *Varroa destructor* (Varroidae, Mesostigmata, Parasitiformes) (Zhang *et al.* 2011) demonstrate Jim's commitment to developing practical applications of Acari research. In recognition of these and other acarological impacts, we nominate Dr. Amrine for the James A. McMurtry Award. Here we review highlights of his remarkable career, and celebrate his scientific as well as personal contributions.

Early years: pre-Acari

Born on November 17, 1941 in Marion, Ohio, Jim grew up in Columbus and graduated Ohio State University (OSU) with a B.S. in Entomology in 1963.⁷⁷ Continuing at OSU in the lab of Dr. Carl Vernard, he reared and described the biology, morphology, and taxonomy of one of the most medically important arthropods in the world in his 1971 thesis, *The black flies (Diptera: Simuliidae) of Ohio*.¹ After obtaining an M.S. degree in Medical Entomology (ME), he completed a Ph.D. in ME with a Botany minor from Iowa State University in 1975. As a postdoctoral student at West Virginia University (WVU), from 1975–1977 Jim worked on photoactive insecticides, and in 1977 was hired Professor of Entomology, Division of Plant and Soil Sciences, WVU. Courses he taught include Insect Physiology, Insect Morphology, ME, Apiculture, Forensic Entomology, Arachnology, as well as a class on writing Environmental Impact Statements and other documents for the U.S. Environmental Protection Agency, retiring from WVU in 2008.⁷⁷

His publications during this time describe cottontail rabbit fleas (*Cediopsylla simplex*) from SEM images;³ survey the mosquitoes of WV;^{4,5} study the effects of injecting dye into cockroaches;⁸ and report pesticide-evading corn caterpillars (*Amphipoea velata*).⁹ An early adopter of integrated

pest management (IPM), he was one of the first to investigate *Bacillus thuringiensis* (Bt) as a less-toxic alternative to chemical mosquito and black fly control^{7, 10}—a method that is now widespread and continues to be recommended (Gray & Fusco 2017; Lawler 2017).

A pioneer of forensic entomology, between 1978–2013 Dr. Amrine collected data from approximately 75 cases of insects associated with decomposing flesh. Taxon and life stage data were analyzed in collaboration with Dr. Jack Frost, medical pathologist and certified WV State Medical Examiner, and presented with Lee Goff at the First European Forensic Entomology Seminar in Bari, Italy, 1997.⁷⁷

Acari I: Eriophyoidea

In 1985, a conversation with Professor Dale Hindal about multiflora rose, rose rosette disease (RRD), and the eriophyoid mite, *Phyllocoptes fructiphilus* launched a new adventure in Jim's career,⁴⁸ and he turned his attention to even smaller and more mysterious creatures.

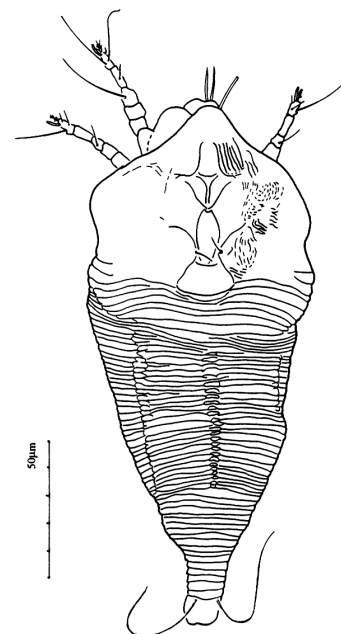
Rosa multiflora is invasive in the eastern U.S., and can form dense thickets that reduce overall biodiversity. Dr. Amrine asked, could *P. fructiphilus* help manage *R. multiflora* by transmitting RRD and slowing growth? Seeing that greenhouse transmission studies were inconclusive (Doudrick et al. 1986), Jim questioned if mature foliage was less susceptible. He dug up plants, removed all aerial portions, forced new growth to form in a greenhouse, and found infection rate was 100%.¹⁵

In 1988, both Jim and Dr. Enrico de Lillo independently began developing their own computerized databases of eriophyoid data. A decade later, the pair collaborated to build a combined common resource “to help researchers easily and quickly find all pertinent information on eriophyoids, especially for identification”.⁴² This eventually developed into a cloud-based Dropbox system that continues to evolve and is currently shared with over 60 members worldwide.¹¹²

As one colleague recalls: “My first personal interaction with Jim was in 1988, when he attended the last year of my presentation of the agricultural acarology course (of my 18 years' stint) during the Summer Acarology Program of The Ohio State University, Columbus. With him being already well-experienced in taxonomic and applied aspects of eriophyoid mites, I invited him to present much of the information on those mites during three days of that three-week course. Thereafter, he was invited to present that section of the agricultural acarology course for a number of years, until the OSU summer program was ended.” (Lindquist pers. comm. 7/27/21).

In 1991, Jim was in England and Scotland researching the capability of *Cecidophyopsis* (Eriophyidae) to vector blackcurrant reversion virus on *Ribes* spp.⁷⁷ By 1994, a new genus was erected “for Dr. James W. Amrine Jr. in honor of his outstanding contributions towards the study of the Eriophyoidea.” *Amrineus cocofolius* (right) can be found on coconut palm fronds and may induce chlorotic and necrotic areas (Flechtmann 1994).

The books *Catalog of the Eriophyoidea (Acarina: Prostigmata) of the world*^{26, 32} and *Revised keys to world genera of Eriophyoidea (Acari: Prostigmata)*⁴⁹ are essential guides for anyone working to understand these enigmatic creatures, and have been called “indispensable” (Lindquist pers.



comm. 7/27/21) “major books” (Zhang 2017), and it’s said that “everybody in erio-world knows [Jim’s] *Key and database*.” (Chetverikov pers. comm. 6/25/21).

In the 1996 reference work *World Crop Pests Vol. 6*, Jim authored one chapter: “*Phyllocoptes fructiphilus* and biological control of multiflora rose”, and coauthored two: “Systematics, diagnoses for major taxa, and keys to families and genera with species on plants of economic importance”, and “Preparation, mounting and descriptive study of eriophyoid mites”. Jim’s methods for preparing and preserving eriophyoids are highly cited, and are the result of countless hours of trial and error to perpetually refine his techniques, as he said, “*My first 6 months back in 1985, all of my slides went into the trash can.*” (Amrine pers. comm. 8/3/21). These efforts earned him a reputation as the world expert, as one remarked “*it would be excellent if you make slides [...] with [Jim]. This is a rare possibility for you to learn his technique. I think this is extremely important for your future erio activity (learning the best technique from the best guru)!*” (Chetverikov, pers. comm. 8/3/21).



Dr. Amrine in Morgantown, WV, August 2021

Jim and his then-Ph.D. student pioneered other methods and greatly expanded our understanding of aerial dispersal behavior of eriophyoids.^{40, 41} In Zhao & Amrine 1997a, they show a single pan trap of soapy water on the roof of a tall building could collect hundreds of eriophyoid species. They also found filtration using a vacuum and micro-filter paper collected eriophyoids more efficiently than previous techniques, and resulted in perfect specimens.

Jim’s style of field education goes beyond a simple “walk in the park”, as topics may range from botany to acarology to behavioral ecology to chemistry and beyond. He finds lessons in any yellow, rusted or deformed leaf, turning a stroll through the garden into a tour of a library of encyclopedias printed on the plants around us. With an eagle eye for detail and a sixth sense for natural curiosities, anything that crosses his path is subject to his integrated approach to careful investigation.

Acari II: *Varroa destructor* and ticks

Honeybees are critical to pollinating our food supply, and parasitic varroa mites are a major pest. With beekeeper Robert Noel, c. 2000 Jim began to test various IPM treatments including formic acid, grease, and oils of lemongrass and spearmint. As Jim said, “*the grease gets on the bees and simply*

makes it harder for the mites to try to hitch a ride”, “it’s like trying to ride a greased pig”, and “African people used lemongrass to manage honey bees for the last several thousand years. They deserve the original credit for that.” (WVUToday 2007, Putney 2007).

For this work, in 2006 Jim was named Researcher of the Year by Florida State Beekeepers, and in 2007 the African Acarological Society and the National Agronomic Institute of Tunisia honored Dr. Amrine with a lifetime recognition award (Schacker 2008; Mancin 2017).

Extending his services beyond agricultural acarology, from 2006–2012, Jim identified tick specimens for Dermpath Diagnostic Labs, Pittsburgh, PA, and estimates he processed ~300 specimens collected from humans in association with suspected Lyme Disease, Rocky Mountain Spotted Fever, etc.⁷⁷



From left: Charnie Craemer (South Africa), Vikram & Indira Prasad (Michigan), Bob Smiley (Maryland (MD)), Ron & Mary Ochoa (MD), Shifu Zhao (WV), Richard Newkirk (MD), James Amrine (WV), at USDA, Beltsville, MD, July 1999.

A search of coauthorships reveals him to be an avid collaborator—far beyond the hills of West Virginia, Dr. Amrine has extensively advanced the study of eriophyoids worldwide. In many eriophyoid papers, when Jim isn’t listed on the byline or references, he’s often cited as personal communication or thanked in the acknowledgments (de Lillo 2001, Santana 2011, Han *et al.* 2016, Rezende 2016, Gómez-Moya *et al.* 2021, Navia *et al.* 2021, Sullivan & Ozman-Sullivan 2021). When Britto *et al.* 2007 boldly named a new genus in Brazil from soursop after a fictional ogre (*Shrekin graviolae*, as the long laterodorsal scapular tubercles bore resemblance to the eponymous cartoon character’s ears), they made sure to acknowledge “*James W. Amrine Jr.* [...] *for his constructive input regarding the decision of establishing the new genus.*”

By 2013 Jim had described several new genera and many new species;⁷⁷ over a decade into retirement, Jim still serves as the world’s foremost Eriophyoidea expert (Sullivan & Ozman-Sullivan 2021, Navia *et al.* 2021).

Endorsements

In response to an informal survey regarding this nomination, respondents replied: “*I’ve known Jim for a long time. His enthusiasm, work ethic, mentoring and publication record over many, many*

years make him a worthy nominee for the McMurtry Award. [...] Jim was [...] an invited speaker for the [XV International Congress of Acarology, 2018, Antalya, Turkey]. It was wonderful to have the 'father figure' of eriophyoid mites there."

"He makes an impression of a very energetic person, and he is a star in Acarology. The first time I saw him, he walked surrounded by students at a scientific conference in Turkey."

"Given his incredible longevity and productivity in working with mites, Jim would be a very worthy recipient of the McMurtry Award so thank you for nominating him."

"Jim's enthusiasm and knowledge combined to make him an effective teacher of eriophyoidology."

"I can say that he is very optimistic, cheerful, and always smiling. He is very inquisitive, thorough and committed to solving scientific problems. I have only positive impressions from this meeting and from email contacts."

"He is a great scientist, but he is an amazing human [...] With a big, big heart. And a love for very little, little creatures."

When approached about this biography, Jim's initial response was not to boast about his accomplishments but to immediately give credit to "Dr. Vik Prasad [...] Vik made all the difference in helping me get started in my career." (Amrine pers. comm. 7/3/21).

Always looking forward, Dr. Amrine wrote: "Right now, [USDA-Smithsonian] wants my collection. But their lab is barely above sea level, and I foresee ocean levels approaching a 100 ft rise in the next 70 years. All of DC will have to be moved, at a horrendously huge expense...The collection needs to be in a safe place. [...] I can visualize a small, air conditioned building with great microscopes, cold stage SEM, laser scanning confocal microscopes, DNA lab, about 20 hard-working assistants and about 5 dedicated geneticists and acarologists. It would have vehicles for collecting and a great world-travel fund. It would be great for this vision to come true!" (Amrine, pers. comm. 5/4/21).

This tribute would be incomplete without also honoring the contributions of Jim's longtime friend, WVU colleague, and "strong right arm from 1980 to 2009" (Amrine pers. comm. 7/4/21), Terry Ann Stasny (1929–2020). As Jim said, "This work could not have been done without the expert assistance of my assistant, Terry Stasny."⁴⁸ Terry (below, right; photo from Baker *et al.* 1996) is remembered for her joyful charisma and ability to inspire the serenity and energy needed to work with these mites, and is missed by many.

Acknowledgements

The authors thank Drs. Samuel J. Bolton, Philipp E. Chetverikov, Charnie Craemer, Enrico de Lillo, Tobiasz Druciarek, Pavel B. Klimov, Hans Klompen, Evert E. Lindquist, Sebahat Ozman-Sullivan, Vikram Prasad, Anna Skoracka and Gregory T. Sullivan for sharing remarks and recollections. We're also grateful to Dr. Zhi-Qiang Zhang for providing this opportunity, as well as to Dr. Ozman-Sullivan, Dr. Sullivan, and an anonymous reviewer for contributing comments that improved the manuscript. Photo #1 of Dr. Amrine contributed by Dr. Amrine; photo #2 by JS, group photo #1 provided by RO; *Amrineus* drawing reprinted with kind permission from Dr. Carlos H.W. Flechtmann.

Disclaimer

Unless cited otherwise, views and opinions here are those of the authors, and do not necessarily state or reflect those of the USDA. Mention of trade names or commercial products in this publication is

solely for the purpose of providing specific information and does not imply recommendation or endorsement by the USDA; the USDA is an equal opportunity provider and employer.



From left to right- Mercedes Delfinado-Baker, Edward W. Baker, Carl Childers, James W. Amrine Jr., Sueo Nakahara, Charmie Craemer (South Africa), Bob Smiley, Terry A. Stasny (July 1995).

References Part 1: authored or coauthored by Dr. Amrine (chronological)

1. Amrine, J.W.Jr. (1971) *The black flies (Diptera: Simuliidae) of Ohio*, Master's thesis, OhioLINK ETD, Ohio State University, Columbus, Ohio, USA, 281 pp.
2. McIver, S. & Amrine, J.W.Jr. (1975) Preparation techniques [ethanol cryofracture] for SEM of internal surfaces of biological specimens. *Bulletin, Microscopic Society of Canada*, 3(3), 4–6.¹¹³
3. Amrine, J.W.Jr. & Lewis, R. (1978) The topography of the exoskeleton of *Cediopsylla simplex* (Baker 1895) (Siphonaptera: Pulicidae). *Journal of Parasitology*, 64, 343–358.
<https://doi.org/10.2307/3279688>
4. Butler, L. & Amrine, J.W.Jr. (1978) Annotated list of mosquitoes of West Virginia. *Mosquito News: Journal of the American Mosquito Control Association*, 38, 101–104.
http://www.biodiversitylibrary.org/content/part/JAMCA/MN_V38_N1_P101-104.pdf
5. Butler, L. & Amrine, J.W.Jr. (1980) New state and county records for mosquitoes in West Virginia. *Mosquito News: Journal of the American Mosquito Control Association*, 40, 347–350.
https://archive.org/stream/cbarchive_117529_newstateandcountyrecordsformos1980/MN_V40_N3_P347-350_djvu.txt
6. Amrine, J.W.Jr. (1981) Scanning Electron Microscopy. Chap. 16. In: *FDA Technical Bulletin No. 1: Principals of Food Analysis for Filth, Decomposition, and Foreign Matter*. J. Richard Gorham, ed., pp. 233–245. HHS Publication No. (FDA) 80-2128, 286 pp.¹¹³
7. Molloy, D. & Amrine, J.W.Jr. (1982) Biological control of black flies (Diptera: Simuliidae) with *Bacillus thuringiensis* var. *israelensis* (serotype 14): a review with recommendations for laboratory and field protocol.. Molloy, D., Ed.; proceedings of a conference held 16–17 April, 1981 by the *Regional Black Fly Research Project*, Morgantown, WV, 37 pp.
8. Weaver, J.E., Butler, L. & Amrine, J.W.Jr. (1982) Effects of erythrosin B on hemocytes of the American cockroach. *Environmental Entomology*, 11, 463–466.
<https://doi.org/10.1093/ee/11.2.463>
9. Amrine, J.W.Jr. & Butler, L. (1983) *Amphipoea velata* (Walker) (Lepidoptera, (Noctuidae) attacking corn near Friendsville, Maryland. *Entomological News*, 94, 101–102.

- <https://www.biodiversitylibrary.org/page/2691629>
10. Amrine, J.W.Jr. (1983) Measuring stream discharge and calculating treatment of rates of *Bacillus thuringiensis* (H14) for black fly control. *Mosquito News: Journal of the American Mosquito Control Association*, 43(1), 17–21.
https://archive.org/download/cbarchive_117891_measuringstreamdischargeandcal1983/MN_V43_N1_P017-021_text.pdf
 11. Hindal, D.F. & Amrine J.W.Jr. (1987) New findings of rose rosette disease. *Phytopathology*, 77, 987.¹¹³
 12. Amrine, J.W.Jr. & Hindal, D.F. (1988) *Rose rosette: a fatal disease of multiflora rose*. Agricultural and Forestry Experiment Station, 4. West Virginia University, Morgantown, WV, USA.¹¹³
 13. Hindal, D.F., Amrine, J.W.Jr., Williams, R.L. & Stasny, T.A. (1988) Rose rosette disease on multiflora rose (*Rosa multiflora*) in Indiana and Kentucky. *Weed Technology*, Weed Science Society of America, 2(4), 442–444.
<https://www.jstor.org/stable/3987377>
 14. Hindal, D.F., Amrine, J.W.Jr. & Stasny, T.A. (1988) Investigations on rose rosette on multiflora rose and its vector in southern Indiana. *Proceedings of the West Virginia Academy of Science*, 60(1), 10–11.¹¹³
 15. Amrine, J.W.Jr., Hindal, D.F., Stasny, T.A., Williams, R.L. & Coffman, C.C. (1988) Transmission of the rose rosette disease agent to *Rosa multiflora* by *Phyllocoptes fructiphilus* (Acari, Eriophyidae) *Entomological News*, 99, 239–252.
<https://www.biodiversitylibrary.org/page/2737894>
 16. Amrine, J.W.Jr. & Stasny, T.A. (1989) The eriophyid mite, *Paraphytoptes pannolus* K. on giant ragweed, *Ambrosia trifida* L. *Proceedings of the West Virginia Academy of Science*, 61(1), 23.¹¹³
 17. Amrine, J.W.Jr., Hindal, D.F., Williams, R., Appel, J., Stasny, T.A. & Kassir, A. (1990) Rose rosette as a biocontrol of multiflora rose. *Proceedings of the Southern Weed Science Society*, 43, 316–319.
<https://agris.fao.org/agris-search/search.do?recordID=US19920044808>
 18. Kassir, A. & Amrine, J.W.Jr. (1990) Rearing and development of *Phyllocoptes fructiphilus* (Acari: Eriophyidae). *Entomological News*, 101, 276–282.
<https://www.biodiversitylibrary.org/page/2699757>
 19. Hall, J., Amrine, J.W.Jr., Gais, R.D., Kolanko, V.P., Hagenbuch, B., Gerencser, V. & Clark, S.M. (1991) Parasitization of humans in West Virginia by *Ixodes cookei* (Acari: Ixodidae), a potential vector of Lyme borreliosis. *Journal of Medical Entomology*, 28(1), 186–189.
<https://doi.org/10.1093/jmedent/28.1.186>
 20. Amrine, J.W.Jr. (1991) Biocontrol of multiflora rose. *Annual Report for 1990, West Virginia Agricultural and Forestry Experiment Station*, 10–13.¹¹³
 21. Amrine, J.W.Jr. & Stasny, T.A. (1993) Biocontrol of multiflora rose. In: *Biological pollution: the control and impact of invasive exotic species*, proceedings of a symposium held at the University Place Conference Center, Indiana University-Purdue University at Indianapolis on October 25 & 26, 1991, McKnight, B.N. (Ed.), Indiana Academy of Sciences, Indianapolis, Indiana, 9–21.
 22. Jones, A., Amrine, J.W.Jr., Roberts, I., Duncan, G., Fenton, B., Malloch, G., McGavin, W. & Birch, A. (1993) The ultrastructure and taxonomic evaluation of eriophyid mites of *Ribes*. *Annual Report*, Scottish Crop Research Institute, pp. 116–119.
 23. Amrine, J.W.Jr. (1993) Eriophyid mites on *Ribes* (Grossulariaceae). In: Hummer, K.E. (Ed.), *Proceedings of the Ribes Risk Assessment Workshop*, 17–18 Aug. 1992, Corvallis, Oregon: 17–20 + appendices 1–5, 44–75.
 24. Roberts, I., Duncan, G., Amrine, J.W.Jr. & Jones, A. (1993) Morphological and ultrastructural studies on three species of *Cecidophyopsis* mites (Acari: Eriophyidae) on *Ribes*. *Acta Horticulturae*, 352, 591–596.
<https://doi.org/10.17660/ActaHortic.1993.352.87>
 25. Roberts, I., Jones, A. & Amrine, J.W.Jr. (1994) Ultrastructure of the black currant gall mite, *Cecidophyopsis ribis* (Acari: Eriophyidae), the vector of the agent of reversion disease. *Annals of Applied Biology*, 125, 447–455.
 26. Amrine, J.W.Jr. & Stasny, T.A. (1994) *Catalog of the Eriophyoidea (Acarina: Prostigmata) of the World*. West Bloomfield, Michigan, USA, Indira Publishing House, 798 pp.
 27. Amrine, J.W.Jr., Duncan, G.H., Jones A.T., Gordon, S.C. & Roberts, I.M. (1994) *Cecidophyopsis* mites (Acari: Eriophyidae) on *Ribes* spp. (Grossulariaceae). *International Journal of Acarology*, 20, 139–168.
 28. Amrine, J.W.Jr., Kassir, A. & Stasny, T.A. (1995) *Phyllocoptes fructiphilus* (Acari: Eriophyidae) the vector of rose rosette disease; taxonomy, biology and distribution, pp. 61–66. In: Epstein, A.H. & Hill, J.H. (Eds.), *Rose Rosette and Other Eriophyid Mite-transmitted Disease Agents of Uncertain Etiology*, proceedings of an international symposium, Ames, Iowa, USA, Iowa State University Press.
 29. Fenton, B., Malloch, G., Jones, A.T., Amrine, J.W.Jr., Gordon, S.C., A'hara, S., McGavin, W. & Birch, A. (1995) Species identification of *Cecidophyopsis* mites (Acari: Eriophyidae) from different *Ribes* species and countries using molecular genetics. *Molecular Ecology*, 4(3), 383–387.
<https://doi.org/10.1111/j.1365-294X.1995.tb00231.x>
 30. Flechtman, C.H.W., Amrine, J.W.Jr. & Stasny, T.A. (1995) *Distaceria ommatos* gen. nov., sp. nov., and a new *Acalitus* sp. (Acari: Prostigmata: eriophyidae) from a Brazilian Rubiaceae. *International Journal of Acarology*, 21, 203–209.
<https://doi.org/10.1080/01647959508684059>
 31. Flechtman, C.H.W., Amrine, J.W.Jr. & Stasny, T.A. (1995) Two new eriophyid mites (Acari: Eriophyoidea) associated with *Campanesia* (Myrtaceae) in Brazil. *International Journal of Acarology*, 21, 211–216.
<https://doi.org/10.1080/01647959508684060>
 32. Amrine, J.W.Jr. & Stasny, T.A. (1996) Corrections to the catalog of the Eriophyoidea (Acarina: Prostigmata) of the world. *Internationa-*

- tional Journal of Acarology*, 22(4), 295–304.
33. Amrine, J.W.Jr. (1996) 4.1.2 *Phyllocoptes fructiphilus* and biological control of multiflora rose, Editor(s): E.E. Lindquist, M.W. Sabelis, J. Bruin, *World Crop Pests*, 6, 741–749.
[https://doi.org/10.1016/S1572-4379\(96\)80050-9](https://doi.org/10.1016/S1572-4379(96)80050-9)
 34. Amrine, J.W.Jr., Stasny, T.A. & Skidmore, R. (1996) New mite controls investigated. *American Bee Journal*, 136(9), 652–654.¹¹³
 35. Amrine, J.W.Jr. & Manson, D.C.M. (1996) 1.6.3 Preparation, mounting and descriptive study of eriophyoid mites. In: Lindquist, E.E., Sabelis, M.W. & Bruin, J. (Eds.), *World Crop Pests*, 6, 383–396.
[https://doi.org/10.1016/S1572-4379\(96\)80023-6](https://doi.org/10.1016/S1572-4379(96)80023-6)
 36. Baker, E.W., Kono, T., Amrine, J.W.Jr., Delfinado-Baker, M. & Stasny, T.A. (1996) *Eriophyoid mites of the United States*. W. Bloomfield, M., Indira Publishing House, 394 pp. + i - viii.
 37. Lindquist, E.E. & Amrine, J.W.Jr. (1996) 1.1.2 Systematics, diagnoses for major taxa, and keys to families and genera with species on plants of economic importance. *World Crop Pests*, 6, 33–87.
[https://doi.org/10.1016/S1572-4379\(96\)80004-2](https://doi.org/10.1016/S1572-4379(96)80004-2)
 38. Shevtchenko, V., DeMillo, A.P., Razvyazkina, G.M. & Kapkova, E.A. (1996) Taxonomic separation of similar species of eriophyid mites, *Aceria tulipae* Keifer and *A. tritici* sp. n. (Acarina, Eriophyoidea) - vectors of the viruses of onions and wheat (Amrine, J.W. Jr., Trans.). *International Journal of Acarology*, 22, 149–160. (Original work published 1970, Taksonomiceskoje razgranicenje blizkch vidov cetyrechnogich klescej *Aceria tulipae* Keifer i *A. tritici* sp. n. (Acarina, Eriophyidae) perenosicikov virusov luka i pšenicy. *Zoological Zhurnal*, 49, 224–235.)
<https://doi.org/10.1080/01647959608684089>
 39. Underwood, J.F., Loux, M.M., Amrine, J.W.Jr. & Bryan, W.B. (1996) Multiflora rose control. *Ohio State University Extension Bulletin*, 857, 1–14 pp.¹¹³
 40. Zhao, S. & Amrine, J.W.Jr. (1997a) A new method for studying aerial dispersal behaviour of eriophyoid mites (Acari: Eriophyoidea). *Systematic & Applied Acarology*, 2(1), 107–110.
<https://doi.org/10.11158/SAA.2.1.14>
 41. Zhao, S. & Amrine, J.W.Jr. (1997b) Investigation of snowborne mites (Acari) and relevancy to dispersal. *International Journal of Acarology*, 23, 209–213.
<https://doi.org/10.1080/01647959708683565>
 42. de Lillo, E. & Amrine, J.W.Jr. (1998) Eriophyoidea (Acari) on a computer database. *Entomologica: Annali di Entomologia Generale ed Applicata*, Bari, Italy, 32, 7–21.
<https://doi.org/10.15162/0425-1016/700>
 43. Craemer, C., Sobhian, R., McClay, A. & Amrine, J.W.Jr. (1999) A new species of *Cecidophyes* (Acari: Eriophyidae) from *Galium aparine* (Rubiaceae) with notes on its biology and potential as a biological control agent for *Galium spurium*. *International Journal of Acarology*, 25, 255–263.
<https://doi.org/10.1080/01647959908684162>
 44. Sauer, R. & Amrine, J.W. Jr. (2001a) Rose Rosette Disease Revisited. *The Yellow Rose*, 17(9), 12–13, 20–22.¹¹³
 45. Sauer, R. & Amrine, J.W.Jr. (2001b) Rose Rosette Disease Revisited. *Heritage Roses*, 26(2), 2–4 + map.¹¹³
 46. Noel, B., Amrine, J.W.Jr. & Kovács, Á. (2002a) Organic treatment IPM for honey bee mites. *American Bee Journal*, 142, 359–361.
 47. Noel, B., Amrine, J.W.Jr. & Kovács, Á. (2002b) Integrated pest management combined with mite resistant queens to combat acaricide-resistant *Varroa*. *American Bee Journal*, 142(9), 672–674.
 48. Amrine, J.W.Jr. (2002) Chapter 22: Multiflora Rose (265–292 pp.). In: Driesche, F.V., Blossey, B., Hoodle, M., Lyon, S. & Reardon, R. (Eds.), *Biological Control of Invasive Plants in the Eastern United States*, USDA Forest Service Publication FHTET-2002-04, 413 pp.
<https://www.invasive.org/biocontrol/22MultifloraRose.html>
 49. Amrine, J.W.Jr., Stasny, T.A. & Flechtmann, C.H.W. (2003) *Revised keys to world genera of Eriophyoidea (Acari: Prostigmata)*. Michigan, U.S.A., Indira Publishing House, 244 pp.
 50. Coyle, D. & Amrine, J.W.Jr. (2004) New collection records and host range of the cottonwood leafcurl mite, *Tetra lobulifera* (Keifer) (Acari: Eriophyidae), in the USA. *International Journal of Acarology*, 30, 3–8. https://digital.library.unt.edu/ark:/67531/metadc776978/m2/1/high_res_d/835204.pdf
 51. Kamali, H. & Amrine, J.W.Jr. (2005) Studies on the eriophyid mites (Acari: Eriophyidae) of Iran: 1. two new species of *Aceria*, with a key to Iranian species. *International Journal of Acarology*, 31, 57–62.
<https://doi.org/10.1080/01647950508684417>
 52. Navia, D., Flechtmann, C.H.W. & Amrine, J.W.Jr. (2005) Supposed ovoviviparity and viviparity in the coconut mite, *Aceria guerrerensis* Keifer (Prostigmata: Eriophyidae), as a result of female senility. *International Journal of Acarology*, 31, 63–65.
<https://doi.org/10.1080/01647950508684418>
 53. Craemer, C., Amrine, J.W.Jr., de Lillo, E. & Stasny, T.A. (2005) Nomenclatural changes and new synonymy in the genus *Diptilomiopus* Nalepa, 1916 (Acari: Eriophyoidea: Diptilomiopidae). *International Journal of Acarology*, 31, 133–136.
<http://dx.doi.org/10.1080/01647950508683664>
 54. Amrine, J.W.Jr. & Stasny, T.A. (2005) The genus *Epitrimerus* Nalepa, 1898 and the pear rust mite, *Epitrimerus pyri* (Nalepa, 1891) (Prostigmata: Eriophyidae). *International Journal of Acarology*, 31, 137–141.
<https://doi.org/10.1080/01647950508683665>

55. Amrine, J.W.Jr. & Noel, R. (2006) Formic acid fumigator for controlling varroa mites in honey bee hives. *International Journal of Acarology*, 32, 115–124.
<https://doi.org/10.1080/01647950608684452>
56. Xue, X., Song, Z., Amrine, J.W.Jr. & Hong, X. (2006) Eriophyid mites (Acari: Eriophyoidea) on bamboo from China, with descriptions of three new species from the Qinling Mountains. *Annals of the Entomological Society of America*, 99(6), 1057–1063.
[https://doi.org/10.1603/0013-8746\(2006\)99\[1057:EMAEOB\]2.0.CO;2](https://doi.org/10.1603/0013-8746(2006)99[1057:EMAEOB]2.0.CO;2)
57. Ozman-Sullivan, S.K., Amrine, J.W.Jr. & Walter, D. (2006) A new species of eriophyoid mite (Acari: Eriophyidae) on sugarcane in Australia. *International Journal of Acarology*, 32, 387–395.
<https://doi.org/10.1080/01647950608684487>
58. Amrine, J.W.Jr., Noel, R. & Webb, D. (2007) Results of 50% formic acid fumigation of honey bee hives [*Apis mellifera ligustica* (Hymenoptera: Apidae)] to control *Varroa* mites (Acari: Varroidae) in brood combs in Florida, U.S.A. *International Journal of Acarology*, 33, 109–99.
<https://doi.org/10.1080/01647950708684508>
59. Xue, X., Song, Z., Amrine, J.W.Jr. & Hong, X. (2007) Eriophyoid mites on coniferous plants in China with descriptions of a new genus and five new species (Acari: Eriophyoidea). *International Journal of Acarology*, 33, 333–345.
<https://doi.org/10.1080/01647950708683695>
60. Amrine, J.W.Jr. (2008) *Varroa* mites and viruses. Proceedings of the Entomological Society of America Annual Meeting 2008.
61. Roberts, I., Jones, A.T. & Amrine, J.W.Jr. (2008) Ultrastructure of the black currant gall mite, *Cecidophyopsis ribis* (Acari: Eriophyidae), the vector of the agent of reversion disease. *Annals of Applied Biology*, 125, 447–455.
<https://doi.org/10.1111/j.1744-7348.1994.tb04982.x>
62. Lekveishvili, M., Amrine, J.W.Jr. & Wells, J. (2008) Phylogeny of genus *Aceria* (Prostigmata: Eriophyoidea). *Proceedings of the Entomological Society of America Annual Meeting 2008*, presentation 0039.
63. Monfreda, R., Krizkova-Kudlikova, I., Petanovic, R. & Amrine, J.W.Jr. (2008) Consideration on eriophyoid detection. In: *Integrative Acarology - Proc. 6th Europ. Congr.*, Bertrand, M., et al. (eds.). European Association of Acarologists, pp. 291–295.
64. Monfreda, R., Lekveishvili, M., Petanović, R. & Amrine, J.W.Jr. (2009) Collection and detection of eriophyoid mites. *Experimental and Applied Acarology*, 51(1–3), 273–282.
<https://doi.org/10.1007/s10493-009-9315-6>
65. Skoracka, A., Smith, L., Oldfield, G., Cristofaro, M. & Amrine, J.W.Jr. (2009) Host-plant specificity and specialization in eriophyoid mites and their importance for the use of eriophyoid mites as biocontrol agents of weeds. *Experimental and Applied Acarology*, 51, 93–113.
<https://doi.org/10.1007/s10493-009-9323-6>
66. Amrine, J.W.Jr. & Noel, R. (2010) Proteins, honey bee nutrition and Amino-B Booster™. *American Bee Journal*, 150, 363–365.
67. de Lillo, E., Craemer, C., Amrine, J.W.Jr. (2010) Recommended procedures and techniques for morphological studies of Eriophyoidea (Acari: Prostigmata). *Experimental and Applied Acarology*, 51, 283–307.
<https://doi.org/10.1007/s10493-009-9311-x>
68. Michalska, K., Skoracka, A., Navia, D. & Amrine, J. (2010) Behavioural studies on eriophyoid mites: an overview. *Experimental and Applied Acarology*, 51, 31–59.
<https://doi.org/10.1007/s10493-009-9319-2>
69. Skoracka, A., Smith, L., Oldfield, G., Cristofarro, M. & Amrine, J.W.Jr. (2010) Host specificity and specialization in eriophyoid mites and their importance for the use of eriophyoid mites as biocontrol agents of weed. *Experimental and Applied Acarology*, 51, 93–113.
<https://doi.org/10.1007/s10493-009-9323-6>
70. Smith, L., de Lillo, E. & Amrine, J.W.Jr. (2010) Effectiveness of eriophyid mites for biological control of weedy plants and challenges for future research *Experimental and Applied Acarology*, 51, 115–149. <https://doi.org/10.1007/s10493-009-9299-2>
71. Hein, G., Ochoa, R., Bauchan, G., de Lillo, E., Chetverikov, P.E. & Amrine, J.W.Jr. (2011) The cold-stage SEM captures new structure and ecology of the wheat curl mite. *Conference: Entomological Society of America Annual Meeting 2011*.
72. Prasad, V., & Amrine, J.W.Jr. (2011) Is the elongated opisthosoma in *Bharatoliaphilus punjabensis* Prasad, 1975 (Acari: Pterygosomatidae) an ovipositor? *International Journal of Acarology*, 37, 190–200.
<https://doi.org/10.1080/01647954.2010.502906>
73. Zhang, Z., Fan, Q., Pešić, V., Smit, H., Bochkov, A., Khaustov, A., Baker, A., Wohltmann, A., Wen, T., Amrine, J.W.Jr., Beron, P., Lin, J., Gabrys, G. & Husband, R.W. (2011) Order Trombidiformes Reuter, 1909. In: Zhang, Z.-Q. (Ed.), Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. *Zootaxa*, 3148, 129–138.
<https://doi.org/10.11646/ZOOTAXA.3148.1.24>
74. Konvipasruang, P., Chandrapatya, A., Amrine, J.W.Jr., Ochoa, R., Bauchan, G. & Pratt, P. (2012) A new species, *Aceria neopaederiae* (Acari: Eriophyidae), infesting *Paederia foetida* L. (Rubiaceae) in Thailand, Hong Kong and Singapore. *Systematic & Applied Acarology*, 17(2), 191–201.
<http://doi.org/10.11158/saa.17.2.5>
75. Hein, G., French, R., Siriwetwivat, B. & Amrine, J.W.Jr. (2012) Genetic characterization of North American populations of the wheat curl mite and dry bulb mite. *Journal of Economic Entomology*, 105(5), 1801–8. <http://dx.doi.org/10.1603/EC11428>
76. Konvipasruang, P., Chandrapatya, A. & Amrine, J.W.Jr. (2012) Redescription of seven species of eriophyoid mites from bamboo (Poaceae, Bambuseae) in Thailand. *Journal of The Acarological Society of Japan*, 21, 67–94.

- <https://doi.org/10.2300/acari.21.67>
77. Amrine, J.W.Jr. (2013) Résumé provided to authors by Dr. Amrine, April 2022.
 78. Skoracka, A., Kuczyński, L., Rector, B.G. & Amrine, J.W.Jr. (2014) Wheat curl mite and dry bulb mite: untangling a taxonomic conundrum through a multidisciplinary approach. *Biological Journal of The Linnean Society*, 111, 421–436.
<https://doi.org/10.1111/bij.12213>
 79. Flechtmann, C.H.W. & Amrine, J.W.Jr. (2014) A new species of *Tegoprionus* Keifer (Prostigmata: Eriophyidae) from Brazil, described from all motile stages, with an overview of the genus *Tegoprionus*. *Acarologia*, 54, 81–88.
<https://doi.org/10.1051/acarologia/20142117>
 80. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2014) A new genus, two new species, and a new generic name of Phyllocop-tine mites (Acari: Eriophyidae) infesting Yang-na, *Dipterocarpus alatus* Roxb. ex G. Don (Dipterocarpaceae) in Thailand. *Journal of The Acarological Society of Japan*, 23, 15–28. <https://doi.org/10.2300/acari.23.15>
 81. Windham, M., Windham, A., Hale, F. & Amrine, J.W.Jr. (2014) Observations on rose rosette disease. *Rose Rosette Handout*, Univer-sity of Tennessee Institute of Agriculture, 10 pp.
<http://counties.agrilife.org/williamson/files/2014/08/Rose-rosette-handout-March-11-2014.pdf>
 82. Amrine J.W.Jr. (2014) What happens to *Phyllocoptes fructiphilus* K., the vector of Rose Rosette Virus, in winter? *American Rose Annual*, 42(12), 118–121.
 83. Warmund, M. & Amrine, J.W.Jr. (2015) Eriophyid mites inhabiting American elderberry. *Acta Horticulturae*, 1061, 155–159.
<https://doi.org/10.17660/ActaHortic.2015.1061.15>
 84. Prasad, V. & Amrine, J.W.Jr. (2015) Histopathologic studies on bite of a female American dog tick, *Dermacentor variabilis* (Acari: Ixodidae), in a man: Changes in skin. *Persian Journal of Acarology*, 4.
<https://doi.org/10.22073/pja.v4i1.10193>
 85. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2015) Six new generic names for eriophyid mites described from Thailand, with supplement descriptions and illustrations (Acari, Eriophyoidea). *Systematic & Applied Acarology*, 20(5), 523–555.
<https://doi.org/10.11158/saa.20.5.8>
 86. Petanović, R., Amrine, J.W.Jr., Chetverikov, P. & Cvrković, T. (2015) *Eriocaeus* (Acari: Trombidiformes: Eriophyoidea), a new genus from *Equisetum* spp. (Equisetaceae): morphological and molecular delimitation of two morphologically similar species. *Zoo-taxa*, 4013(1), 51–66.
<https://doi.org/10.11646/zootaxa.4013.1.3>
 87. Flechtmann, C.H.W., Arana, M.D., Ciarrocchi, F., Chetverikov, P. & Amrine, J.W.Jr. (2015) Rediscovery and redescription of two eriophyid mites (Acari, Prostigmata, Eriophyidae) from *Baccharis salicifolia* (Asteraceae), from Argentina with remarks on the eriophyid coverflap base. *Acarologia*, 55, 387–396.
<https://doi.org/10.1051/acarologia/20152178>
 88. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2016) Present status of eriophyid mites in Thailand. Acarology XIV: Pro-ceedings of the International Congress of Acarology, 2014, Tokyo, Japan. *Journal of The Acarological Society of Japan*, 25(1), 83–107.113.
 89. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2016) New eriophyid mites from Thailand. *Systematic & Applied Acarol-ogy*, 20(1), 55–78.
<https://doi.org/10.11158/saa.21.1.5>
 90. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2016) Two new genera and one new assignment of eriophyid mites (Acari: Eriophyoidea) from Thailand. *Persian Journal of Acarology*, 5, 35–49.
<https://doi.org/10.22073/pja.v5i1.16277>
 91. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2016) Present status of eriophyid mites in Thailand. *Journal of The Acaro-logical Society of Japan*, 25(1), 83–107.
https://doi.org/10.2300/ACARL.25.SUPPL_83
 92. Chetverikov, P., Hörweg, C., Kozlov, M. & Amrine, J.W.Jr. (2016) Reconditioning of the Nalepa collection of eriophyid mites (Acariformes, Eriophyoidea). *Systematic & Applied Acarology*, 21, 583–595.
<https://doi.org/10.11158/saa.21.5.3>
 93. Chandrapatya, A., Konvipasruang, P. & Amrine, J.W.Jr. (2017) *Catalog of Thai Eriophyoidea (Acari: Prostigmata) with illustrations and keys to genera of Thai mites*. Printing Office, Extension and Training Office, Kasetsart University, 526 pp.
 94. Chetverikov, P., Amrine, J.W.Jr., Bauchan, G., Ochoa, R., Sukhareva, S. & Vishnyakov, A. (2017) Supplementary description of *Novophytoptus stipae* Keifer 1962 (Acariformes, Eriophyoidea) with LT-SEM observation on mites from putatively conspecific populations: cryptic speciation or polyphagy of novophytoptines on phylogenetically remote hosts? *Systematic & Applied Acarol-ogy*, 22, 253–270.
<https://doi.org/10.11158/saa.22.2.9>
 95. Chetverikov, P., Craemer, C., Nesar, S., Peralta, L. & Amrine, J.W.Jr. (2017) Transcontinental dispersal, common ancestry or conver-gent evolution? New phyllocoptines (Eriophyidae) from American and South African relict conifers. *Systematic & Applied Acarol-ogy*, 22, 724–748.
<https://doi.org/10.11158/saa.22.5.11>
 96. Craemer, C., Amrine, J.W.Jr., Childers, C.C., Rogers, M. & Achor, D. (2017) A new eriophyid mite species, *Diptilomiopus florida-nus* (Acari: Eriophyoidea: Diptilomiopidae), from citrus in Florida, USA. *Systematic & Applied Acarology*, 22, 386–402.
<https://doi.org/10.11158/saa.22.3.5>

97. Otero-Colina, G., Ochoa, R., Amrine, J.W.Jr., Hammond, J., Jordan, R. & Bauchan, G. (2018) Eriophyoid mites found on healthy and rose rosette diseased roses in the United States. *Journal of Environmental Horticulture*, 36, 146–153.
<https://doi.org/10.24266/0738-2898-36.4.146>
98. Elhalawany, A., Amrine, J.W.Jr. & Ueckermann, E. (2019) Description of five new species (Acari: Eriophyidae: Phyllocoptinae: Anthocoptini) associated with the weed *Imperata cylindrica* (Poaceae) from Egypt. *Systematic & Applied Acarology*, 24, 742–770.
<https://doi.org/10.11158/saa.24.5.3>
99. Tran, H.T., Van, H.N., Muniappan, R., Amrine, J.W.Jr., Naidu, R., Gilbertson, R. & Sidhu, J. (2019) Integrated pest management of longan (Sapindales: Sapindaceae) in Vietnam. *Journal of Integrated Pest Management*, 10(1), 18.
<https://doi.org/10.1093/jipm/pmz016>
100. Chetverikov, P., Desnitskaya, E.A., Efimov, P., Bolton, S.J., Cvrković, T., Petanović, R., Zukoff, S.N., Amrine, J.W.Jr. & Klimov, P. (2019) The description and molecular phylogenetic position of a new conifer-associated mite, *Setoptus tsugivagus* n. sp. (Eriophyoidea, Phytoptidae, Nalepellinae). *Systematic & Applied Acarology*, 24, 683–700.
<https://doi.org/10.11158/saa.24.4.13>
101. Chetverikov, P., Bolton, S.J., Burlakovskiy, M.S., Craemer, C., Efimov, P., Klimov, P., Nesar, S., Paponova, S.S., Romanovich, A., Sukhareva, S. & Amrine, J.W.Jr. (2019) Supplementary descriptions and DNA barcodes of two rarely encountered *Trisetacus* species (Eriophyoidea, Phytoptidae) associated with Tertiary relict conifers from the Mediterranean region. *Systematic & Applied Acarology*, 24, 1631–1652.
<https://doi.org/10.11158/saa.24.9.5>
102. Konvipasruang, P., Chandrapatya, A. & Amrine, J.W.Jr. (2019) A new genus and new species of eriophyoid mites (Prostigmata: Eriophyoidea) from Thailand with supplementary description of two species. *Systematic & Applied Acarology*, 24, 1975–1987.
<https://doi.org/10.11158/saa.24.11.1>
103. Chetverikov, P., Amrine, J.W.Jr., Kiss, E., Kotschán, J. & Ripka, G. (2020) Reassignment of *Rhyncaphytoptus longipalpis* Xue et Hong, 2005 (Diptilomiopidae) to *Bambusacarus* n. gen. (Eriophyidae) and remarks on shape of oral stylet and orientation of pharynx in Eriophyoidea (Acari: Acariformes). *Systematic & Applied Acarology*, 25, 759–771.
<https://doi.org/10.11158/saa.25.4.14>
104. Chetverikov, P., Romanovich, A., Schubert, M., Sukhareva, S., Zukoff, S.N. & Amrine, J.W.Jr. (2020) New species and records of *Trisetacus* Keifer (Eriophyoidea, Nalepellidae) with an atypical shape of female internal genitalia collected from *Chamaecyparis*, *Juniperus*, and *Thuja* (Cupressaceae) in the USA. *Systematic & Applied Acarology*, 25, 787–808.
<https://doi.org/10.11158/saa.25.5.2>
105. Chetverikov, P., Cvrković, T., Efimov, P., Klimov, P., Petanović, R., Romanovich, A., Schubert, M., Sukhareva, S., Zukoff, S.N. & Amrine, J.W.Jr. (2020) Molecular phylogenetic analyses reveal a deep dichotomy in the conifer-inhabiting genus *Trisetacus* (Eriophyoidea: Nalepellidae), with the two lineages differing in their female genital morphology and host associations. *Experimental and Applied Acarology*, 81, 287–316.
<https://doi.org/10.1007/s10493-020-00503-4>
106. Chetverikov, P., Craemer, C., Cvrković, T., Klimov, P., Petanović, R., Romanovich, A., Sukhareva, S., Zukoff, S.N., Bolton, S.J. & Amrine, J.W.Jr. (2020) Molecular phylogeny of the phytoparasitic mite family Phytoptidae (Acariformes: Eriophyoidea) identified the female genital anatomy as a major macroevolutionary factor and revealed multiple origins of gall induction. *Experimental and Applied Acarology*, 83, 31–68.
<https://doi.org/10.1007/s10493-020-00571-6>
107. Elhalawany, A., Xue, X. & Amrine, J.W.Jr. (2020) Five new eriophyid mite species from Egypt (Acari: Eriophyidae) associated with the weeds of the family Poaceae. *Systematic & Applied Acarology*, 25, 379–408.
<https://doi.org/10.11158/saa.25.2.13>
108. Skvarla, M., Ochoa, R., Ulsamer, A. & Amrine, J.W.Jr. (2021) The eriophyid mite *Aculops ailanthis* Lin, Jin, & Kuang, 1997 (Acariformes: Prostigmata: Eriophyidae) from tree-of-heaven in the United States – new state records and morphological observations. *Acarologia*, 61, 121–127.
<https://doi.org/10.24349/acarologia/20214421>
109. Gómez-Moya, C.A., Amrine, J.W.Jr., Flechtmann, C.H.W., Campos, D., Navia, D. & Suárez, P. (2021) First record of *Phyllocoptura musae* (Acari: Prostigmata: Eriophyidae) in the neotropics, in Hispaniola. *Nota, Novitates Caribaeae*, 18, 209–213.
<http://doi.org/10.33800/nc.vi18.271>
110. Elhalawany, A., Amrine, J.W.Jr. & Ueckermann, E. (2021) A new species and a new record of eriophyoid mites from mango orchards (Trombidiformes: Eriophyoidea) in Egypt with a note on the population dynamics of four eriophyoid species. *Acarines*, 15, 1–22.
<https://doi.org/10.11158/saa.27.6.3>
111. Chetverikov, P., Rector, B., Tonkel, K., Dimitri, L., Cheglakov, D., Romanovich, A. & Amrine, J.W.Jr. (2022) Phylogenetic position of a new *Trisetacus* mite species (Nalepellidae) destroying seeds of North American junipers and new hypotheses on basal divergence of Eriophyoidea. *Insects*, 13, 201.
<http://doi.org/10.3390/insects13020201>
112. de Lillo, E. & Amrine, J.W.Jr. (2022) The computerized catalog of the Eriophyoidea. Available as a share from *Dropbox.com* by request from jamrine@wvu.edu. 18 files, 1.53 GB. Updated weekly.
113. Amrine J.W.Jr. (April 2022) Acarological references of James W. Amrine, Jr., by year. Provided to authors by Dr. Amrine, April 2022.

References Part 2: not authored by Dr. Amrine (alphabetical)

1. Britto, E., Gondim, M., Navia, D. & Flechtmann, C. (2007) New taxa of eriophyid mites (Acari: Eriophyidae) from fruit trees in northeastern Brazil. *International Journal of Acarology*, 33, 347–351.
<https://doi.org/10.1080/01647950708683696>
2. De La Torre, P. (2011) A new species and new record of Eriophyoidea (Acari: Prostigmata) from Cuba, *Systematic & Applied Acarology*, 16(2), 176–180.
<https://doi.org/10.11158/saa.16.2.6>
3. Doudrick, R.L., Enns, W.R., Brown, M.F. & Millikan, D.F. (1986) Characteristics and role of the mite, *Phyllocoptes fructiphilus* (Acari: Eriophyidae) in the etiology of rose rosette. *Entomological news*, 97(4), 163–168.
<https://ia600206.us.archive.org/23/items/biostor-76987/biostor-76987.pdf>
4. Flechtmann, C.H.W. (1994) *Amrineus cocofolius* n.g., n.sp. (Acari: Eriophyidae) from Brazil. *International Journal of Acarology*, 20(1), 57–59.
<http://doi.org/10.1080/01647959408684000>
5. Gray, E. & Fusco, R. (2017) Microbial Control of Black Flies (Diptera: Simuliidae) with *Bacillus thuringiensis* subsp. *israelensis*. Chapter in *Microbial Control of Insect and Mite Pests*, Academic Press, pp. 367–377.
<http://doi.org/10.1016/B978-0-12-803527-6.00025-1>
6. Han, X., Hong, X.Y. & Zhang, Z.Q. (2016) Identification of *Aceria genistae* species complex (Acari: Eriophyidae) from broom, gorse and related plants (Fabaceae: Genisteae) in western US and a new record of *Aculops hussongi*. *Systematic & Applied Acarology*, 21(11), 1525–1533.
<http://doi.org/10.11158/saa.21.11.8>
7. Lawler, S.P. (2017) Environmental safety review of methoprene and bacterially-derived pesticides commonly used for sustained mosquito control. *Ecotoxicology and Environmental Safety*, 139, 335–343.
<https://doi.org/10.1016/j.ecoenv.2016.12.038>
8. Mancini, J. (2017) WVU professor authority on bees. *The Parkersburg News and Sentinel*. Retrieved 24 April 2022 from <https://www.wvpress.org/breaking-news/wvu-professor-authority-bees/>
9. Navia, D., Duarte, M. & Flechtmann, C. (2021) Monograph Eriophyoid mites (Acari: Prostigmata) from Brazil: an annotated checklist. *Zootaxa*, 4997, 1–152.
<https://doi.org/10.11646/zootaxa.4997.1.1>
10. Putney, M. (2007) "Where have all the bees gone? A mystery creates theories galore." *Science & Spirit*, 18(3), 17–18.
11. Rezende, J.M. (2016) Taxonomic revision and phylogenetic analysis of the *Daidalotarsonemus* De Leon and *Excelsotarsonemus* Ochoa & Naskrecki species (Acari: Tarsonemidae) - Thesis presented as part of the requirements for obtaining the Animal Biology PhD at the Animal Biology Graduation Program of the Institute of Biosciences, Letters and Exact Sciences, São Paulo State University "Júlio de Mesquita Filho", Campus São José do Rio Preto. Retrieved 24 April 2022 from https://repositorio.unesp.br/bitstream/handle/11449/137937/rezende_jm_dr_sjrp_int.pdf
12. Santana, P.E.D.L.T. (2011) A new species and new record of Eriophyoidea (Acari: Prostigmata) from Cuba. *Systematic & Applied Acarology*, 16(2), 176–180.
<https://doi.org/10.11158/saa.16.2.6>
13. Schacker, M. (2008) *A Spring without Bees: How Colony Collapse Disorder has Endangered Our Food Supply*. Guilford, Conn, Lyons Press, 292 pp.
14. Sullivan, G.T. & Ozman-Sullivan, S.K. (2021) Alarming evidence of widespread mite extinctions in the shadows of plant, insect and vertebrate extinctions. *Austral Ecology*, 46, 163–176.
<https://doi.org/10.1111/aec.12932>
15. *WVUToday* (2007) WVU professor helps develop techniques to reduce threat against honeybees. Retrieved April 24, 2022 from <http://wvu-today-archive.wvu.edu/n/2007/05/17/5759.html>
16. Xue, X.F., Dong, Y., Deng, W., Hong, X.Y. & Shao, R. (2017) The phylogenetic position of eriophyoid mites (superfamily Eriophyoidea) in Acariformes inferred from the sequences of mitochondrial genomes and nuclear small subunit (18S) rRNA gene. *Molecular Phylogenetics and Evolution*, 109, 271–282.
<https://doi.org/10.1016/j.ympev.2017.01.009>
17. Zhang, Z.Q. (2017) Eriophyoidea and allies: where do they belong? *Systematic & Applied Acarology*, 22(8), 1091–1095.
<https://doi.org/10.11158/saa.22.8.1>
18. Zhang, Z.Q., Schatz, H., Pfingstl, T., Goldschmidt, T., Martin, P., Pešić, V., Ramirez, M., Schmidt, K.H., Fan, Q.H., Mironov, S., Seeman, O. & Halliday, B. (2021) Discovering and documenting Acari: the first twenty years in Zootaxa. *Zootaxa*, 4979(1), 115–130.
<https://doi.org/10.11646/zootaxa.4979.1.13>

Submitted: 29 Apr. 2022; accepted by Zhi-Qiang Zhang: 5 May 2022; published: 8 Jun. 2022