

OBITUARY AND DEDICATION



Karl, November 1990, demonstrating the latest in sifter technology (photo, H. W. Robison).

Karl Heinz Stephan 1931–2005

This issue is dedicated to the memory of Karl Heinz Stephan, from the small town of Red Oak in Latimer County, Oklahoma, who passed away in June 2005 of an apparent heart attack. Almost everyone active in Coleoptera taxonomy in North America and many in other parts of the world knew of Karl as an extraordinary beetle collector, naturalist, and author of a number of important beetle monographs. Karl was born 15 May 1931 in what would become East Germany. He and his family suffered through the Second World War intact and immigrated to Windsor, Ontario in 1952. Karl's early life, the family's experiences as immigrants in Canada, and much of Karl's adult biography were documented by Howard Weems (Weems 1989) in a forward to Karl's colydiid and bothriderid monograph. Suffice it to say that Karl had a keen interest in natural history and coleopterology from an early age, and he pursued the latter with unabated passion until his untimely death.

Karl's career path was in engineering. His work on beetles was heavily influenced by that background and by his talents as a resourceful and practical problem solver. He was quite possibly the most skilled beetle collector of modern times. Though he

employed or cleverly customized a large number of collecting methods (Appendix 1), his true talent was knowing exactly where and how to collect specimens of reputedly rare species. He had an uncanny ability to capture some of the rarest and most obscure beetle species in North America by doing nothing more than walking into his front yard and rustling a patch of moldy hay into a pan or flipping rocks during just the right conditions. He would explain that the new species of *Arianops* (Staphylinidae: Pselaphinae) and *Anillinus* (Carabidae) from a particular hillside could only be taken beneath large rocks during or just following a torrential downpour. To this day he is probably the only person who has collected specimens of those species, and how he figured these things out in the first place is simply remarkable. He was also a cunning opportunist. For a number of years prior to his retirement in 1996, Karl was the “rural water man” for Latimer County. The white, columnar water towers that dot the landscape of Latimer County needed to be serviced periodically. Karl understood local weather dynamics and knew when these towers would be covered with condensation due to temperature fluctuations. As he would explain, when they were wet they functioned like huge flight intercept traps, with small beetles sticking to their white-colored surfaces where they could be easily harvested. Another of his many “favorite techniques” was using a beating sheet on the vegetation of a steep, south-facing bluff near his home. When winds were just right, airborne beetles would be blown up to the crest and precipitate onto the low vegetation, where they were easily accessible. His 30 years in rural Latimer County were spent collecting, which has made this county one of the most thoroughly documented pieces of real estate in the U.S. for beetle diversity. At last count, he had recorded 3,516 species based on ~52,500 specimens that comprised one of his last donations to the Texas A&M Insect Collection.

While his collection consisted of all of the local taxa, it included many rare taxa, including species of genera that had not been previously collected in the United States. He collected beetles everywhere he lived. Even in Canada, not known for its exotic and unknown beetle fauna, he collected new species (*e.g.*, the first known specimens of *Hadromychus chandleri* Bousquet and Leschen, collected in 1967, almost 20 years before any others were collected). Though primarily a taxonomist, he also became involved with ecology, conservation, and education, including instruction at the nearby community college and presentations to various school groups. He became nationally famous for a time when the endangered American burying beetle, *Necrophorus americanus* Oliver, was starting to become the focus of conservation groups and he had the only recently collected specimens from west of the Mississippi.

Karl was a wonderful mentor to fellow coleopterists, especially those just beginning their careers, and displayed all of the generosity towards his guests he could muster. Karl’s place was a naturalist’s Mecca in the form a small 2-story country house outside Red Oak on a large tract of land covered mainly by oak/hickory forest. A typical visit during the mid-1980’s included collecting in the local environs for taxa of interest, looking over his impressive collection of local beetles in his incredibly cramped office space, and socializing around the picnic-style kitchen table with Karl and his wife Jan. She died in 2003 after a long debilitating illness that made the last few years difficult for the family. Jan was accommodating of Karl’s eccentric guests in a motherly way and served excellent country-style meals. Most discussions were about beetles or getting married (for single guests). Karl could be highly critical, especially of those who didn’t include keys to taxa that occurred in his neck of the woods, but he had a good sense of humor (*e.g.*, his pet name for Peter Kovarik was “pig shit Pete” because of Pete’s propensity to stockpile and transport pig manure long distances for use as hister beetle bait).

Karl was also a bit of an academic who had an appreciation for minutia. He would study specimens in every detail with a microscope that gave most people an immediate

headache, and yet discover characters overlooked in the past. He also collaborated on various projects and while he lived in Arizona he was asked by John Lawrence to come to Harvard to work on beetles. He declined, opting for a workingman's lifestyle and keeping beetles as a hobby.

Few people spent much time traveling in the field with Karl. During the Latimer County years, he rarely ventured outside the borders of the county. But during the eight years he lived in Tucson, he was more adventurous, as evidenced by the following reminiscence from one of us (DSC):

I moved to Tucson in 1971 to work on an M.S. at the University of Arizona. Floyd Werner suggested that I meet Karl, and shortly we were planning various trips. We first went on a number of day trips, where I was astonished by how productive the desert could be during the heat of the day. "You must think like the beetle" he would say, and try to figure out where they are hiding. All those rare and interesting things that fly to lights at night are hiding during the day, and can be found with persistence. Karl could be incredibly persistent in tracking down where species could be found.

We decided to take a weekend trip to southern Sonora (Mexico) to a spot where Karl had been before, and that was the closest area that was characterized by a definite Neotropical fauna. We left early on a Friday, and planned to be back late Sunday night, and fit in two days of collecting at a spot east of Alamos on the Arroyo Cuyuchaba. As we proceeded east of Alamos on the dirt road that eventually reaches the state of Durango, we crossed the small river in the Arroyo several times, and I commented on the increasingly heavy, dark clouds forming overhead. I wondered aloud if it did rain, perhaps we should be on the west side of Arroyo, because if it did rain a lot, we might not be able to cross the stream to get back to Alamos. Karl scoffed at this thought, and thought the storm would blow over quickly. Shortly after we set up camp, it started to rain, and it rained heavily for two days. Once the rain stopped it became very hot and humid. It took a day for the road to dry up enough to travel, whereupon we quickly broke camp and made our way to the banks of the Arroyo, which now looked to be about 100 m across and impassable. For the next three days we watched the water slowly recede.

During this time we collected—albeit miserably, but constantly night and day. A large series of a new species of *Anchylarthron* (Staphylinidae: Pselaphinae), was found under rocks along the Arroyo—the high water table had forced them up along with their ant hosts. I have never seen another specimen of this species. The northernmost records of two species of Lepiceridae (*Lepicerus bufo* (Hinton) and *L. inaequalis* Motschulsky), and a georyssid (*Georyssus minor* Sharp) were taken from flood debris. Karl liked to use a wide variety of collecting techniques, had come prepared, and we had the time to employ them all.

As we waited for the waters to recede, Mexicans on foot and horses would stop by to visit and commiserate, and offer food and shelter in their houses (usually 1–2 hours away by foot, and we didn't want to leave the vehicle). We had brought provisions for a two-day trip, and with rationing by the seventh day we only had left a half package of soggy saltine crackers, some scrapings of peanut butter, and a small tin of Vienna sausages. I loathe Vienna sausages, but I was constantly salivating as I anticipated our planned noontime meal of sausages and soggy crackers. The river was reaching the point where it was almost passable, but not quite yet. To our surprise a large truck came down the road from Durango. On the way one of the rear shackle bolts had broken when they came down too hard in a big hole during the first day of rain. Every two kilometers or so they had to stop the truck, place a large boulder in front of the wheel with the broken shackle bolt, carefully drive forward as the boulder pinned that wheel so that the rear axle and drive train could be straightened out so it wouldn't break when it got too crooked. They had been doing this for the past five days, and hadn't brought any food for their planned one-day trip. As they gobbled down our sausages, crackers, and did their best to lick the peanut butter jar clean, we negotiated passage with them and used a rope to tie Karl's vehicle to the back of their truck. We then drove in powered tandem, and they pulled us across the three crossings of the Arroyo when our wheels broke free and we began to drift downstream.

Afterwards I heroically never brought up my comments about the wisdom of proceeding across the Arroyo with impending rain. When we returned the next year to collect again, Karl thought maybe this time we would stay on the west side and not cross the river. I thought that was a good idea.

In addition to the aforementioned donations to Texas A&M, many thousands of specimens from Latimer County and almost his entire pre-Oklahoma collection from Arizona and Canada (45,000 specimens, ~8,600 species) are housed in the Florida State Collection of Arthropods. The staphylinids and histerids from this early material are in the Field Museum of Natural History. Karl discovered a great many new species, many of which are named after him. At last count he had 21 published patronyms in 14 families by 23 authors (Appendix 3), mostly based on his material from Arizona and Oklahoma. Karl authored or co-authored five genus-group names and 57 species spread among five beetle families (Appendix 4). When he died, Karl was in the final stages of a massive long-term project to revise the "*Connophron* section" of the *Euconnus* genus complex of Scydmaenidae. Karl had completed thousands of tedious dissections, and reams of text and illustrations. No fewer than 180 North American species are treated, including 130 new species. These manuscript materials are presently under evaluation, and a plan is being formulated to ensure that Karl's final beetle project will be completed and published. Karl's 50-yr. legacy of beetle collecting, a publication record that includes several major monographs of difficult taxa, and his friendly and collegial attitude towards colleagues form a fitting testimonial to the value of avocational entomology to systematics and biodiversity research.

We thank the following individuals for their help checking literature and names presented in this contribution: J. Klimaszewski, A. F. Newton, Jr., and S. B. Peck. We thank Victoria Bayless and Dorothy Prowell for their constructive comments.

Literature Cited

Weems, H. V., Jr. 1989. Forward [pp. x–xii]. *In: The Bothrideridae and Colydiidae of America north of Mexico (Coleoptera: Clavicornia and Heteromera)* (K. H. Stephan). Occasional Papers of the Florida State Collection of Arthropods 6.

Christopher E. Carlton, Louisiana State Arthropod Museum, Louisiana State University, Baton Rouge, LA 70803, U.S.A., **Donald S. Chandler**, Dept of Zoology, University of New Hampshire, Durham, NH 03824, U.S.A., **Richard A. B. Leschen**, New Zealand Arthropod Collection, Private Bag 92170, Auckland, NEW ZEALAND, **Edward G. Riley**, Texas A&M University Insect Collection, College Station, TX 77843, U.S.A., and **Paul E. Skelley**, Florida State Collection of Arthropods, Gainesville, FL 32614, U.S.A.

(Received and accepted 22 July 2005. Publication date 21 October 2005.)

Appendix 1. Additional Comments on Collecting Methods Used by K. H. Stephan

1. When asked how he collected so many of a rare colydiine zopherid, he said "Well, first you get up in the morning and go to the woods. Using your beating sheet, gently pick up small, fallen branches and beat them over the sheet. Keep doing this and by the end of the day you'll have 2 or 3."
2. When a tree was severely damaged outside his front door, he finished cutting it down, but left a stump with a 2-inch slab on top. The sap continued to flow in this stump and created a fermenting sap flux, which Karl would routinely check.
3. He also cut tree trunks into short sections and stacked them back up, then would check them routinely and restack them as the wood passed through various stages of decay.
4. To get at the beetles in a tree hole too high to reach and with an opening too small for his arm, Karl cut a plug of wood out of the tree's side below the original opening. He removed the litter, processed it to remove the beetles, then replaced the litter and plug to be checked later.
5. Many collectors employ various chambers to allow insects to emerge. Karl used a modified top-opening freezer and put entire logs inside.

6. To collect minute pselaphines of the genus *Mayetia*, Karl would dig up grass clumps in spring along the roadside, take them home, and shake the soil off the roots, then Berlese the soil. Simply Berlesing the grass root balls would not work.
7. Karl got occasional contracts to survey for American burying beetles, but they were at risk of drowning in the pitfall cups. To prevent this, he designed a screen-bottomed inner cup and placed a ping-pong ball under it so that if the pitfall flooded, the beetles would be buoyed to safety.
8. Karl pioneered the use of, and perhaps invented, the square hardware cloth "pillowcase sifter." Fold quarter-inch mesh screen into a square tray the size of a pillowcase opening, line the edges and corners with duct tape, and insert into a pillowcase. Throw in a few extra pillowcases and some work gloves and you are ready to sift forest litter.

Appendix 2. Publications of K. H. Stephan

- Bowles, D. E., K. H. Stephan, and M. L. Mathis. 1990.** A new method for collecting adult phryganeid caddisflies (Trichoptera: Phryganeidae). *Entomological News* 101:222–224.
- Lawrence, J. F., and K. H. Stephan. 1975.** The North American Cerylonidae (Coleoptera: Clavicornia). *Psyche* 82:131–166.
- Leschen, R. A. B., I. Löbl, and K. H. Stephan. 1990.** Review of the Ozark Highland *Scaphisoma* (Coleoptera: Scaphidiidae). *Coleopterists Bulletin* 44:274–294.
- Löbl, I., and K. H. Stephan. 1993.** A review of the species of *Baeocera* Erichson (Coleoptera, Staphylinidae, Scaphidiinae) of America north of Mexico. *Revue Suisse de Zoologie* 100:675–733.
- Peck, S. B., and K. H. Stephan. 1996.** Revision of the genus *Colon* Herbst (Coleoptera; Leioididae; Coloninae) of North America. *Canadian Entomologist* 128:667–741.
- Stephan, K. H. 1968.** Notes on additional distribution and ecology of *Euxestus punctatus* LeC. (Coleoptera: Colydiidae). *Coleopterists Bulletin* 22:19.
- Stephan, K. H. 1968.** Observation on *Pelecotoma flavipes* Melsheimer (Coleoptera: Rhipiphoridae). *Coleopterists Bulletin* 22:30.
- Stephan, K. H. 1989.** The Bothriderae and Colydiidae of America north of Mexico (Coleoptera: Clavicornia and Heteromera). *Occasional Papers of the Florida State Collection of Arthropods* 6. 63 pp.
- Stephan, K. H. 1992.** Book Review. Bousquet, Y. (editor). 1991. Checklist of beetles of Canada and Alaska. Agriculture Canada Publ. 1861 vi + 430 pp. *Coleopterists Bulletin* 46:208.
- Triplehorn, C. A., and K. H. Stephan. 1994.** Notes on *Centronopus opacus* LeConte (Coleoptera: Tenebrionidae). *Coleopterists Bulletin* 48:148.

Appendix 3. List of Species Named for K. H. Stephan

(by year of publication)

- Harpalus stephani* Ball, 1972 (Carabidae)
Heterelmis stephani Brown, 1972 (Elmidae)
Malthodes stephani Fender, 1972 (Cantharidae)
Ataenius stephani Cartwright, 1974 (Scarabaeidae)
Sepedophilus stephani Campbell, 1976 (Staphylinidae)
Allobrox stephani Grigarick & Schuster, 1977 (Staphylinidae: Pselaphinae)
Notoxus stephani Chandler, 1978 (Anthicidae)
Brachiacantha stephani Gordon, 1985 (Coccinellidae)
Mordellistena stephani Downie, 1987 (Mordellidae)
Rhombomicrus stephani Pakaluk, 1987 (Endomychidae)
Arianops stephani Carlton, 1989 (Staphylinidae: Pselaphinae)
Liocyrtusa stephani Daffner, 1989 (Leioididae)
Gymnoganasus stephani Werner, 1990 (Aderidae)
Rhexius stephani Chandler, 1990 (Staphylinidae: Pselaphinae)
Scaphisoma stephani Leschen & Löbl, 1990 (Staphylinidae: Scaphidiinae)
Zabrotes stephani Kingsolver, 1990 (Chrysomelidae: Bruchinae)

- Deinopsis stephani* Klimaszewski, 1992 (Staphylinidae)
Leiodes stephani Baranowski, 1993 (Leiodidae)
Colenis stephani Peck, 1998 (Leiodidae)
Anillinus stephani Sokolov & Carlton, 2004 (Carabidae)
Agathidium stephani Miller & Wheeler, 2005 (Leiodidae)

Appendix 4. Taxa Described or Co-described by K. H. Stephan

Bothriideridae

- Bothriideres cryptus* Stephan, 1989:18
Rustleria Stephan, 1989:11
Rustleria obscura Stephan, 1989:11

Cerylonidae

- Cerylon conditum* Lawrence & Stephan, 1975:159
Cerylon distans Lawrence & Stephan, 1975:161
Myhocerus arizonensis Lawrence & Stephan, 1975:144
Ostomopsis neotropicalis Lawrence & Stephan, 1975:146
Philothermus occidentalis Lawrence & Stephan, 1975:152

Zopheridae (=Colydiidae)

- Bitoma neglecta* Stephan, 1989:42
Colydium glabriculum Stephan, 1989:55
Colydium robustum Stephan, 1989:55
Colydium thomasi Stephan, 1989:57
Denophoelus Stephan, 1989:44
Lasconotus knulli Stephan, 1989:48
Megataphrus arizonicus Stephan, 1989:27
Megataphrus chandleri Stephan, 1989:28
Pseudotaphrus Stephan, 1989:26
Pseudotaphrus longus Stephan, 1989:26
Pycnomerus arizonicus Stephan, 1989:59
Pycnomerus quercus Stephan, 1989:60
Rhagodera interrupta Stephan, 1989:22
Rhagodera texana Stephan, 1989:23

Leiodidae

- Colon arcum* Peck & Stephan, 1996:698
Colon blatchleyi Peck & Stephan, 1996:686
Colon boreale Peck & Stephan, 1996:730
Colon californicum Peck & Stephan, 1996:715
Colon chihuahua Peck & Stephan, 1996:720
Colon chiricahua Peck & Stephan, 1996:718
Colon grossum Peck & Stephan, 1996:721
Colon hatchi Peck & Stephan, 1996:716
Colon hesperium Peck & Stephan, 1996:716
Colon incisum Peck & Stephan, 1996:722
Colon longitorsum Peck & Stephan, 1996:709
Colon megasetosum Peck & Stephan, 1996:712
Colon mesum Peck & Stephan, 1996:733
Colon monstrosum Peck & Stephan, 1996:714
Colon nitidum Peck & Stephan, 1996:692
Colon pacificum Peck & Stephan, 1996:684
Colon pararectum Peck & Stephan, 1996:736
Colon politum Peck & Stephan, 1996:696

- Colon potosi* Peck & Stephan, 1996:719
Colon similare Peck & Stephan, 1996:732
Colon vancouverense Peck & Stephan, 1996:694
Colon xilitla Peck & Stephan, 1996:718
Striatocolon (subgen.) Peck & Stephan, 1996:687
Tricolon (subgen.) Peck & Stephan, 1996:684

Staphylinidae: Scaphidiinae

- Baeocera amicula* Löbl & Stephan, 1993:709
Baeocera borealis Löbl & Stephan, 1993:689
Baeocera chisosa Löbl & Stephan, 1993:683
Baeocera compacta Löbl & Stephan, 1993:694
Baeocera elongata Löbl & Stephan, 1993:710
Baeocera hamata Löbl & Stephan, 1993:711
Baeocera hesperia Löbl & Stephan, 1993:691
Baeocera impunctata Löbl & Stephan, 1993:702
Baeocera indistincta Löbl & Stephan, 1993:690
Baeocera inexpectata Löbl & Stephan, 1993:702
Baeocera lenczyi Löbl & Stephan, 1993:702
Baeocera obesa Löbl & Stephan, 1993:686
Baeocera pecki Löbl & Stephan, 1993:687
Baeocera similaris Löbl & Stephan, 1993:692
Baeocera solida Löbl & Stephan, 1993:704
Baeocera sticta Löbl & Stephan, 1993:686