

Ralph W. Holzenthal – a mentor and friend retires

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A much too brief CV

Ralph Holzenthal began his studies in caddisfly diversity at the University of New Orleans, where he completed his Masters of Science degree in 1980 after exploring the caddisfly of southeastern Louisiana and southern Mississippi, which was in his own words, “as far as I could travel in a day with a non-existing budget”. Together with the research of Steve Harris and Paul Lago, Ralph’s MSc thesis significantly contributed to advancing our knowledge of caddisflies in the Southeastern United States (Harris et al. 1982; Holzenthal et al. 1982; Lago et al. 1982). After considering several topics and advisors, Ralph joined John Morse at Clemson University for his Ph.D. on Neotropical Leptoceridae. Specifically, he assessed and analyzed the diversity, evolution, and biogeography of Neotropical Leptoceridae and revised their systematics. At Clemson he also met Steve Hamilton. Ralph and ‘both Steves’ developed very productive professional relationships and personal friendships that last through today. Thus, Ralph became part of a line of Trichoptera workers that would significantly impact our knowledge of the Trichoptera fauna of North and South America. First and foremost, this line goes back to Herbert Ross, Fernand Schmid, Glenn Wiggins, Oliver Flint, and John Morse.

During his graduate studies, Ralph attended his first International Symposium of Trichoptera at Clemson in 1983 and presented and published the first paper of

his Ph.D. work in the symposium's proceedings: a description of the new genus *Achoropsyche* as the first contribution in the nine-part "Studies in Neotropical Leptoceridae" series (Holzenthal 1984). Perhaps more importantly he began many long-term relationships and friendships. He met Fernand Schmid of the Ministry of Agriculture Canada whose style and diligence in the preparation of Trichoptera he idolized and which Ralph has since passed on to generations of students. Through the Symposium he also intensified his interactions with Oliver Flint, an entomologist from the Smithsonian National Museum of Natural History, who became an important mentor for Ralph and whose collected material was the basis for a large part of Ralph's dissertation.

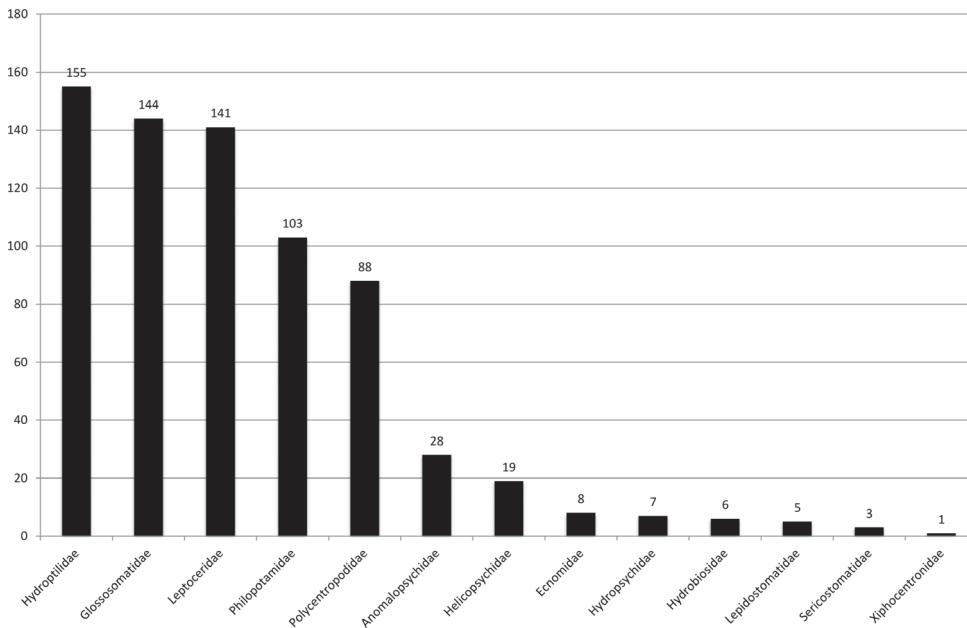
He completed his Ph.D. in Entomology at Clemson University in 1985. Ralph's Neotropical work then really took off when he received three National Science Foundation (NSF) grants to work on the caddisflies of Costa Rica. He began the first grant as a postdoctoral researcher at Clemson University in 1986 but was offered a faculty position as Faculty Director of the University of Minnesota Insect Collection (UMSP) at the University of Minnesota in spring of the same year. The grants and the work on Trichoptera of Costa Rica were instrumental to his tenure at UMSP. His six months sabbatical in 1997–1998 as visiting professor at the Universidade Federal do Paraná, Curitiba, Brazil was crucial to expanding his network in South America and broadening the taxonomic and regional scope of his work. The second influential grant to his career was a 2001 NSF "Partnerships for Enhancing Expertise in Taxonomy" (PEET) award. This grant, focused on formally training students in Trichoptera systematics and taxonomy, enabled Ralph to pursue one of his scientific career passions: training students from across the Americas in insect taxonomy, systematics, and biodiversity. He has since trained numerous younger colleagues through formal and informal avenues, thereby building a legacy of excellent Trichoptera taxonomists particularly known for their revisionary studies and excellent illustrations. Beyond teaching "standard" courses of an entomological curriculum, he also developed unique courses on scientific illustration of insects. These are sought after globally, and Ralph has been invited to give numerous workshops around the world to students and professionals. Ralph also excelled at communicating his knowledge with students. He was a cherished teacher and won multiple faculty teaching awards at the University of Minnesota. These included the FAME Award (Faculty Award for Mentorship in Entomology) presented through "Frenatae", the University of Minnesota's Entomology Graduate Student Organization in 2005 and 2010, which highlights how highly valued Ralph was as a teacher and mentor by his students. Many of his former mentees submitted articles to this volume, to show their gratitude and respect for Ralph's life work. The topics he thus influenced range from faunal surveys and checklists (Cavalcante-Silva et al. 2022; Chuluunbat et al. 2022; Houghton 2022; Luna-Luna et al. 2022) and ecological studies (Houghton et al. 2022; Ríos-Touma et al. 2022) to descriptive taxonomy (Bueno-Soria et al. 2022; Cavalcante-Silva et al. 2022; Martins et al. 2022; Pereira et al. 2022; Ramírez-

Table I. Students mentored by R.W. Holzenthal (in reverse chronological order).

M.Sc.	Ph.D.
Heather Cummins, 2014	Luis Ernesto Rázuri-Gonzales, 2020
Joel Gardner, 2013 (Co-Advisor with M. Spivak)	Lucas Marques de Carmargos, 2020
Anne M. Wasmund, 2006	Robin Thomson, 2014
Dianne M. Crane, 1994 (Co-Advisor with R.D. Moon)	Desiree R. Robertson, 2010
Margot P. Monson, 1994	Maria Lourdes Chamorro, 2009
Roger J. Blahnik, 1991	Henrique Paprocki, 2008
Roger M. Strand, 1991	Fernando Muñoz Quesada, 2003
	David Houghton, 2002
	Aysha Prather, 2002
	Roger J. Blahnik, 1996
	Atilano Contreras-Ramos, 1996
	Sonia M.N. Lazzari, 1990

Carmona et al. 2022; Rázuri-Gonzales et al. 2022) and systematic revisions (Blahnik and Andersen 2022; Sganga et al. 2022; Thomson et al. 2022a, b).

The impact of his scientific work on Neotropical and other Trichoptera is seen in the 708 species (Figs 1, 2) he has described in dozens of publications and compendia (e.g., Flint et al. 1999; Holzenthal and Calor 2017), the twelve new genera and subgenera described, the incredible collection he has built, and the many students he trained.

**Figure I.** Number of new species described by R.W. Holzenthal by family (ordered by rank).

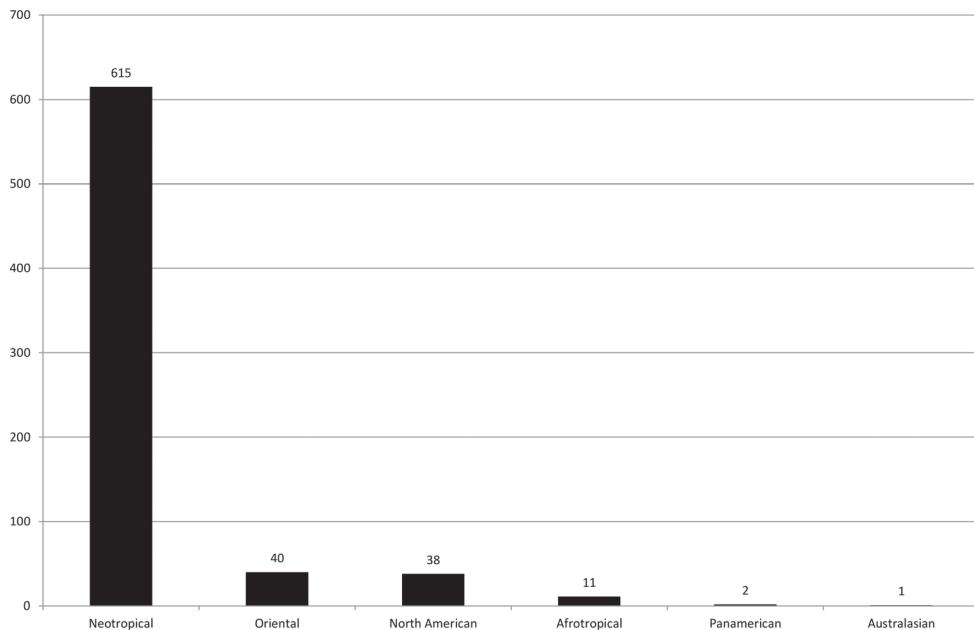


Figure 2. Number of species described by R.W. Holzenthal by biogeographical region (ordered by rank).

Our interpretation of the scientific legacy of Ralph W. Holzenthal

Ralph's impact goes beyond pure numbers; his taxonomic contributions are characterized by particularly comprehensive treatments of morphology and species descriptions, often representing extensive revisions of taxonomic groups (e.g., Holzenthal 1982; Holzenthal and Flint 1995) or regional faunas (e.g., Andersen and Holzenthal 2001, 2002) and authoritative catalogues (Flint et al. 1999; Holzenthal and Calor 2017). This resulted in a body of work of lasting value that is still relevant today, decades later, and is used not only as a basis for identifications but also for further systematic work.

In our opinion, and this was passed on to us by Ralph's mentoring, excellent taxonomic publications not only clarify the morphological characters that are central to the identification of the taxa in question but also allow interpretation of homology of characters relevant for evolutionary analysis. Excellent and clear illustrations are central for this purpose. Ralph has developed his own style for traditionally and digitally inked line drawings and illustrations that succeed in being both unambiguous, thereby allowing identification, but also being sufficiently detailed to allow initial assessments of homology and convergence. He has introduced these methods to many subsequent generations through formal classes and informal courses and workshops.

Another cornerstone in Ralph's career has been an openness to innovative methodologies. Ralph conducted phylogenetic analyses to clarify evolutionary questions early in his doctoral studies, initially following the principles established by Hennig (1969). Hennigian phylogenetics were a major innovation in taxonomy at the time of Ralph's first studies, influencing his decision to work with John Morse for his Ph.D., as John

Morse was already using these methods. Throughout his career Ralph applied many methodological innovations to his work. These included digital approaches to illustration (Holzenthal 2008), database systems for collections management, and computer-generated natural language descriptions and taxonomic keys (e.g., DELTA; Dallwitz 1974, 1980). He later adopted the use of molecular data in phylogenetic systematics and developed them further in cooperation with colleagues (Kjer et al. 2001), up to current applications of genomics in phylogenetics (Thomson et al. 2022b). As Faculty Director of the University of Minnesota Insect Collection (UMSP), he leaves behind one of the foremost Neotropical Trichoptera collections in the world, and a well-curated insect collection of more than 4 million specimens where species level identification lies at an astonishing ~ 70%. All Trichoptera specimens are databased and have machine-readable barcode labels (for a searchable database of these specimens, see [https://scan-bugs.org/portal/](https://scan-bugs.org/)). This approach to taxonomy and systematics, not only for its own sake but also as a service to other scientists, is what we believe sets Ralph's contributions apart.

Ralph also has a strong awareness of obstacles to taxonomic publication and the central role of identification keys in organismal biology. This awareness led Ralph to join ZooKeys as a Trichoptera subject editor, where for five years his editorial leadership influenced many authors of excellent taxonomic papers. This is a further example of his service-oriented mindset.

But to what end did Ralph make these contributions? By making the world's caddisfly fauna more available to systematists as well as evolutionary and conservation biologists, Ralph has helped advance the taxonomy of Trichoptera beyond the pioneering efforts of Dr. Oliver S. Flint to a new stage of knowledge for the Neotropics. In addition to descriptive and revisionary taxonomy, he has also advocated for the value of museums and collections in an ongoing and uphill endeavor. In the face of global climate change, this is an enterprise that now seems more important than ever because the secure refuges set aside to protect species no longer seem so permanent or secure. Natural habitats have been disappearing at alarming rates for the last few decades, which impacts our livelihoods and welfare. Biological inventories in turn raise awareness of the benefits of protecting these habitats and the biodiversity they hold. However, particularly in the tropics, these inventories usually focus on relatively well-known, easily identifiable, or charismatic groups such as birds, mammals, butterflies, and ants, while many other groups are scarcely known. By subsequently establishing protected areas known to be diverse, conservationists and biodiversity researchers aspire that these less well-known groups can also be protected and eventually described. At the rate natural habitats are being destroyed, however, it is unlikely the focus on few protected areas will suffice to preserve all the hitherto unknown diversity.

In a recent paper, Ralph and colleagues recorded 310 caddisfly species from Ecuador and estimated that only 54% of the Trichoptera fauna from this country is known to science (Ríos-Touma et al. 2017). Moreover, several Neotropical genera found in Ecuador are highly endemic at the species level (e.g., *Amphoropsyche*, *Atanatolica*, and *Contulma*), with new genera and species routinely discovered and described in these areas (Holzenthal et al. 2017, 2018). The same scenario applies in the forests of other tropical countries, and estimating how many additional species may have initially been present before these forests were deforested is impossible to accomplish.

Beyond diversity predictions and reserving natural habitats in the hope of protecting diversity, a fundamental concern for the loss of species should begin with a sense of urgency to know what might be lost. Because species are not really fathomable until they are more than theoretical numbers. How can one truly mourn the loss of species that were not even known to exist? How will one know that they were truly lost if there are no records that they existed in the first place? How do we still have such a poor knowledge of our planet's biodiversity after more than 250 years naming species? If the diversity of species on the planet is as great as scientists have estimated, why does the description of biodiversity of the planet receive such a low priority?

Ralph understands that providing empirical evidence and a comprehensible characterization of biological diversity is of utmost importance to supporting conservation efforts. After a stellar career in taxonomy, with the description of hitherto 708 species previously unknown to science (see Figs 1, 2), Ralph can join the ranks of the many thousands of taxonomists who have contributed to the description of the Earth's biological diversity. Many of his descriptions were conducted with students he trained, thereby ensuring a lasting legacy of his work and his ideas on high-quality approaches to taxonomy that will transcend through generations.

Over the years, Ralph's thinking and his approach to taxonomy have inspired many others, especially young scientists and students, as is evident in the articles in this issue. Perhaps more importantly, all his students maintain a love and appreciation of both taxonomy and the diversity of aquatic insects. Ralph's knowledge and enthusiasm for these topics has impressed his students to such a degree that they all maintained subject and mentor close to their hearts.

List of publications

1980

Poirrier MA, Holzenthal RW (1980) Records of spongilla-flies [Neuroptera: Sisyridae] from Mississippi. *Journal of the Mississippi Academy of Science* 25: 1–2.

1982

Harris SC, Lago PK, Holzenthal RW (1982) An annotated checklist of the caddisflies (Trichoptera) of Mississippi and Southeastern Louisiana. Part II: Rhyacophiloidea. *Proceedings of the Entomological Society of Washington* 84: 509–512.
Holzenthal RW (1982) The caddisfly genus *Setodes* in North America (Trichoptera: Leptoceridae). *Journal of the Kansas Entomological Society* 55: 253–271.
Holzenthal RW, Harris SC, Lago PK (1982) An annotated checklist of the caddisflies (Trichoptera) of Mississippi and southeastern Louisiana. Part III: Limnephiloidea and conclusions. *Proceedings of the Entomological Society of Washington* 84: 513–520.

Lago PK, Holzenthal RW, Harris SC (1982) An annotated checklist of the caddisflies (Trichoptera) of Mississippi and Southeastern Louisiana. Part I: Introduction and Hydropsychoidea. Proceedings of the Entomological Society of Washington 84: 495–508.

1983

Holzenthal RW, Kelley RW (1983) New micro-caddisflies from the southeastern United States (Trichoptera: Hydroptilidae). Florida Entomologist 66: 464–472.

1984

Hamilton SW, Holzenthal RW (1984) The caddisfly genus *Helicopsyche* in America, north of Mexico (Trichoptera: Helicopsychidae) (abstract). In: Morse JC (Ed.) Proceedings of the 4th International Symposium on Trichoptera. Dr. W. Junk, The Hague, 167 pp.

Holzenthal RW (1984) Studies in Neotropical Leptoceridae (Trichoptera) I: *Achoropsyche*, a new genus. In: Morse JC (Ed.) Proceedings of the 4th International Symposium on Trichoptera. Dr. W. Junk, The Hague, 181–184.

Morse JC, Holzenthal RW (1984) Trichoptera genera. In: Merritt RW, Cummins KW (Eds) An Introduction to the Aquatic Insects of North America, 2nd Edn. Kendall-Hunt, Dubuque, 312–347.

1985

Bart Jr JL, Holzenthal RW (1985) Feeding ecology of *Necturus beyeri* in Louisiana. Journal of Herpetology 19: 402–410.

Holzenthal RW (1985) Studies in Neotropical Leptoceridae (Trichoptera) II: *Amphoropsyche*, a new genus and species of Leptocerinae from northern South America. International Journal of Entomology 27: 255–269.

Holzenthal RW (1985) Studies in Neotropical Leptoceridae (Trichoptera): their diversity, evolution, and biogeography, with revisions of selected genera. Doctoral, Clemson University, South Carolina.

Holzenthal RW, Harris SC (1985) The female of *Setodes guttatus* with distribution notes (Trichoptera: Leptoceridae). Journal of the Kansas Entomological Society 58: 166–167.

1986

Bueno-Soria J, Holzenthal RW (1986) Estudios de insectos acuáticos V: descripción de tres nuevas especies de trichópteros de México: (Trichoptera: Philopotamidae). Anales del Instituto de Biología, Universidad Nacional Autónoma de México, Serie Zoología 57: 137–144.

Hamilton SW, Holzenthal RW (1986) Two new species of caddisflies from Georgia (Trichoptera: Polycentropodidae, Hydroptilidae). Proceedings of the Entomological Society of Washington 88: 163–166.

- Holzenthal RW (1986) The Neotropical species of *Notalina*, a southern group of long-horned caddisflies (Trichoptera: Leptoceridae). Systematic Entomology 11: 61–73.
- Holzenthal RW (1986) Studies in Neotropical Leptoceridae (Trichoptera), IV: a revision of *Brachysetodes* Schmid. Transactions of the American Entomological Society 111: 407–440.
- Holzenthal RW (1986) Studies in Neotropical Leptoceridae (Trichoptera), a new species of *Amphoropsyche*, with a redescription of the immature stages of *A. insularis* (Flint). Annals of the Entomological Society of America 79: 251–255.
- Holzenthal RW (1986) Studies in Neotropical Leptoceridae (Trichoptera), VI: immature stages of *Hudsonema flaminii* (Navas) and the evolution and historical biogeography of Hudsonemini (Triplectininae). Proceedings of the Entomological Society of Washington 88: 268–279.

1987

- Morse JC, Holzenthal RW (1987) Higher classification of Triplectidinae (Trichoptera: Leptoceridae). In: Bournaud M, Tachet H (Eds) Proceedings of the 5th International Symposium on Trichoptera. Dr. W. Junk, Dordrecht, The Netherlands, 139–144.

1988

- Holzenthal RW (1988) Systematics of Neotropical *Triplectides* (Trichoptera: Leptoceridae). Annals of the Entomological Society of America 81: 187–208.
- Holzenthal RW (1988) Studies in Neotropical Leptoceridae (Trichoptera), VIII: the genera *Atanatolica* Mosely and *Grumichella* Müller (Triplectidinae: Grumichellini). Transactions of the American Entomological Society 114: 71–128.
- Holzenthal RW, Hamilton SW (1988) New species and records of Costa Rican *Polycentropus* (Trichoptera: Polycentropodidae). Journal of the New York Entomological Society 96: 332–344.
- Monson MP, Holzenthal RW, Ahlstrand GG (1988) The larvae and pupa of *Cochiliopsyche vazquezae* (Trichoptera: Helicopsychidae). Journal of the North American Bentholological Society 7: 152–159.
- Holzenthal RW (1988) Catálogo sistemático de los Trichópteros de Costa Rica (Insecta: Trichoptera). Biotropia 29: 51–82.

1989

- Holzenthal RW (1989) Studies in Neotropical Leptoceridae (Trichoptera), IX: a new genus and species from southeastern Brazil. Aquatic Insects 11: 29–32.
- Harris SC, Holzenthal RW (1990) Hydroptilidae (Trichoptera) from Costa Rica: the genus *Mayatrchia* Mosely. Journal of the New York Entomological Society 98: 453–460.

1991

- Holzenthal RW (1991) A preliminary assessment of the fauna of the Reserva Forestal de San Ramón, Costa Rica. In: Ortiz RV (Ed.) Memoria de investigación Reserva Forestal de San Ramón. Universidad de Costa Rica, San Ramón, 79–81.
- Holzenthal RW, Harris SC (1991) The larva of *Byrsoteryx mirifica* Flint, with an assessment of the phylogenetic placement of the genus within the Leuchotrichiini (Trichoptera: Hydroptilidae). In: Tomaszewski C (Ed.) Proceedings of the 6th International Symposium on Trichoptera. Adam Mickiewicz University Press, Poznan, Poland, 403–407.

1992

- Blahnik RJ, Holzenthal RW (1992) Revision of the Neotropical genus *Chimarrhodella* Lestage (Trichoptera: Philopotamidae). Systematic Entomology 17: 109–132.
- Blahnik RJ, Holzenthal RW (1992) New species of *Chimarra* subgenus *Chimarra* Stephens from Costa Rica (Trichoptera: Philopotamidae). Proceedings of the Entomological Society of Washington 94: 409–438.
- Holzenthal RW, Harris SC (1992) Hydroptilidae (Trichoptera) of Costa Rica: the genus *Oxyethira* Eaton. Journal of the New York Entomological Society 100: 155–177.
- Holzenthal RW, Strand RM (1992) New species of *Lepidostoma* from Mexico and Central America (Trichoptera: Lepidostomatidae). Proceedings of the Entomological Society of Washington 94: 490–499.

1993

- Harris SC, Holzenthal RW (1993) Phylogeny of the species groups of *Alisotrichia*, *sensu lato*, with the description of a new species from Costa Rica (Trichoptera: Hydroptilidae). In: Otto C (Ed.) Proceedings of the 7th International Symposium on Trichoptera. Backhuys Publishers, Leiden, The Netherlands, 155–160.
- Monson MP, Holzenthal RW (1993) A new species and new records of *Oxyethira* (Trichoptera: Hydroptilidae) from Minnesota. Journal of the North American Benthological Society 12: 438–443.
- Muñoz-Quesada F, Holzenthal RW (1993) New species and records of Costa Rican *Austrotinodes* (Trichoptera: Ecnomidae). Proceedings of the Entomological Society of Washington 95: 564–573.

1994

- Harris SC, Holzenthal RW (1994) Hydroptilidae (Trichoptera) of Costa Rica and the Neotropics: Systematics of the genus *Byrsoteryx* Flint (Stactobiini). Journal of the New York Entomological Society 102: 154–192.

1995

- Holzenthal RW (1995) The caddisfly genus *Nectopsyche*: new *gemma* group species from Costa Rica and the Neotropics (Trichoptera: Leptoceridae). *Journal of the North American Benthological Society* 14: 61–83.
- Holzenthal RW, Blahnik RJ (1995) New species of *Smicridea* (*Rhyacophylax*) (Trichoptera: Hydropsychidae) from Costa Rica. *Entomological News* 106: 213–223.
- Holzenthal RW, Flint Jr OS (1995) Studies of Neotropical caddisflies, LI: systematics of the Neotropical caddisfly genus *Contulma* (Trichoptera: Anomalopsychidae). *Smithsonian Contributions to Zoology* 575: 1–59.

1996

- Morse JC, Holzenthal RW (1996) Trichoptera genera. In: Merritt RW, Cummins KW (Eds) *An Introduction to the Aquatic Insects of North America*, 3rd Edn. Kendall/Hunt Publishing Company, Dubuque, USA, 350–386.

1997

- Harris SC, Holzenthal RW (1997) *Mejicanotrichia*, a new genus of microcaddisflies from Mexico and Guatemala (Trichoptera: Hydroptilidae). In: Holzenthal RW, Flint Jr OS (Eds) *Proceedings of the 8th International Symposium on Trichoptera*. Ohio Biological Survey, Columbus, 123–128.
- Holzenthal RW (1997) The caddisfly (Trichoptera) family Atriplectididae in the Neotropics. In: Holzenthal RW, Flint Jr OS (Eds) *Proceedings of the 8th International Symposium on Trichoptera*. Ohio Biological Survey, Columbus, 157–165.
- Holzenthal RW, Flint J, O.S. (Eds) (1997) *Proceedings of the 8th International Symposium on Trichoptera*. Ohio Biological Survey, Columbus, 496 pp.
- Muñoz-Quesada F, Holzenthal RW (1997) A new species of *Xiphocentron* (*Antillotrichia*) from Costa Rica with semiterrestrial immature stages (Trichoptera: Xiphocentrionidae). In: Holzenthal RW, Flint Jr OS (Eds) *Proceedings of the 8th International Symposium on Trichoptera*. Ohio Biological Survey, Columbus, 355–363.

1998

- Bueno-Soria J, Holzenthal RW (1998) Studies in aquatic insects XIV: descriptions of eight new species of *Ochrotrichia* Moseley (Trichoptera: Hydroptilidae) from Costa Rica. *Proceedings of the Biological Society of Washington* 111: 604–612.

1999

- Andersen T, Holzenthal RW (1999) The genus *Allosetodes* Banks, 1931, a junior synonym of *Triaenodes* MacLachlan, 1865 (Trichoptera: Leptoceridae). In: Malicky H,

- Chantaramongkol P (Eds) Proceedings of the 9th International Symposium on Trichoptera. Faculty of Science, Chiang Mai University, Chiang Mai, Thailand, 7–16.
- Flint Jr OS, Holzenthal RW, Harris SC (1999) Nomenclatural and systematic changes in the Neotropical caddisflies. *Insecta Mundi* 13: 73–84.
- Flint Jr OS, Holzenthal RW, Harris SC (1999) Catalog of the Neotropical Caddisflies (Trichoptera). Special Publication, Ohio Biological Survey, Columbus, Ohio, 239 pp.
- Harris SC, Holzenthal RW (1999) Hydroptilidae (Trichoptera) of Costa Rica: the genus *Hydroptila* Dalman. *Studies on Neotropical Fauna and Environment* 34: 16–51.
- Holzenthal RW, Harris SC (1999) The genus *Costatrichia* Mosely in Costa Rica, with a review of the Neotropical species (Trichoptera: Hydroptilidae). *Proceedings of the Entomological Society of Washington* 101: 540–568.
- Luhman JC, Holzenthal RW, Kjaeransen JK (1999) New host record of a ceraphronid (Hymenoptera) in Trichoptera pupae. *Journal of Hymenoptera Research* 8: 126.

2001

- Andersen T, Holzenthal RW (2001) West African *Triaenodes* McLachlan (Trichoptera: Leptoceridae). 1. Introduction and subgenus *Triaenodella* Mosely. *Tijdschrift voor Entomologie* 144: 225–246.
- Houghton DC, Holzenthal RW, Monson MP, MacLean DB (2001) Updated checklist of the Minnesota caddisflies (Tricoptera [Trichoptera]) with geographic affinities. *Transactions of the American Entomological Society* 127: 495–512
- Kjer KM, Blahnik RJ, Holzenthal RW (2001) Phylogeny of Trichoptera (Caddisflies): Characterization of signal and noise within multiple datasets. *Systematic Biology* 50: 781–816. <https://doi.org/10.1080/106351501753462812>

2002

- Andersen T, Holzenthal RW (2002) West African *Adicella* McLachlan, 1877 (Trichoptera: Leptoceridae). Proceedings of the 10th International Symposium on Trichoptera, Postdam (Germany), July – August 2000. Deutsches Entomologisches Institut, Goecke & Evers, Keltern, 88–95.
- Andersen T, Holzenthal RW (2002) *Adicella syriaca* Ulmer, 1907 not occurring in the Afrotropical region (Trichoptera: Leptoceridae). *Aquatic Insects* 24: 161–164. <https://doi.org/10.1163/22119434-900000100>
- Andersen T, Holzenthal RW (2002) West African *Triaenodes* McLachlan (Trichoptera: Leptoceridae). 2. Subgenus *Triaenodes sensu stricto*. *Tijdschrift voor Entomologie* 145: 61–88. <https://doi.org/10.1163/22119434-900000100>
- Harris SC, Flint Jr OS, Holzenthal RW (2002) Two new genera of Hydroptilidae from the neotropics (Trichoptera: Hydroptilidae: Stactobiini). *Journal of the New York Entomological Society* 110: 49–64.

- Harris SC, Flint Jr OS, Holzental RW (2002) Review of the Neotropical genus *Flintiella* (Trichoptera: Hydroptilidae: Stactobiini). Journal of the New York Entomological Society 110: 65–90. [https://doi.org/10.1664/0028-7199\(2002\)110\[0065:ROTN\]2.0.CO;2](https://doi.org/10.1664/0028-7199(2002)110[0065:ROTN]2.0.CO;2)
- Harris SC, Holzental RW, Flint Jr OS (2002) Review of the Neotropical genus *Bredinia* (Trichoptera: Hydroptilidae: Stactobiini). Annals of Carnegie Museum 71: 13–45.
- Holzental RW, Cressa C (2002) The Trichoptera, caddisflies, of Venezuela: Three new species and records of *Atopsyche* Banks (Hydrobiosidae). Studies on Neotropical Fauna and Environment 37: 133–143. <https://doi.org/10.1076/snfe.37.2.133.8578>
- Holzental RW, Harris SC (2002) New species of *Nothotrichia* Flint (Trichoptera: Hydroptilidae) from Brazil and Costa Rica. Proceedings of the Entomological Society of Washington 104: 106–110.
- Kjer KM, Blahnik RJ, Holzental RW (2002) Phylogeny of caddisflies (Insecta, Trichoptera). Zoologica Scripta 31: 83–91. <https://doi.org/10.1046/j.0300-3256.2001.00079.x>
- Paprocki H, Holzental RW (2002) A review of the Brazilian genus *Barypenthus* Burmeister (Trichoptera: Odontoceridae). Proceedings of the 10th International Symposium on Trichoptera, Postdam (Germany), July – August 2000. Deutsches Entomologisches Institut, Goecke & Evers, Keltern, 223–230.
- Prather AL, Holzental RW (2002) The identity of *Silvatares excelsus* Navás, 1931. In: Mey W (Ed.) Proceedings of the 10th International Symposium on Trichoptera, Postdam (Germany), July – August 2000. Deutsches Entomologisches Institut, Goecke & Evers, Keltern, 231–234.

2003

- Bueno-Soria J, Holzental RW (2003) New species and records of the microcaddisfly genus *Metricchia* Ross from Costa Rica (Trichoptera: Hydroptilidae). Studies on Neotropical Fauna and Environment 38: 173–197. <https://doi.org/10.1076/snfe.38.3.173.28164>
- Holzental RW, de Almeida GL (2003) New species of Polycentropodidae (Trichoptera) from southeastern and southern Brazil. Proceedings of the Entomological Society of Washington 105: 22–29.
- Houghton DC, Holzental RW (2003) Updated conservation status of protected Minnesota caddisflies. Great Lakes Entomologist 36: 35–40.
- Kjer KM, Holzental RW, Blahnik RJ (2003) Phylogeny of Trichoptera. Entomologische Abhandlungen 61: 166.
- Paprocki H, Holzental RW, Cressa C (2003) A new species of *Smicridea* McLachlan (Trichoptera: Hydropsychidae) from Venezuela and its role in travertine biogenesis. Journal of the North American Benthological Society 22: 401–409.

2004

- Blahnik RJ, Holzental RW (2004) Collection and curation of Trichoptera, with an emphasis on pinned material. Nectopsyche, Neotropical Trichoptera Newsletter 1: 8–20 <http://hdl.handle.net/11299/190744>

- Blahnik RJ, Paprocki H, Holzenthal RW (2004) New distribution and species records of Trichoptera from southern and southeastern Brazil. *Biota Neotropica* 4: 1–6. <https://doi.org/10.1590/S1676-06032004000100009>
- Bueno-Soria J, Holzenthal RW (2004) New species of the genus *Ochrotrichia* Moesly (Trichoptera: Hydroptilidae) from Mexico and Panama. *Transactions of the American Entomological Society* 130: 245–269.
- Chamorro-Lacayo ML, Holzenthal RW (2004) Seven new species of *Polyplectropus* Ulmer (Trichoptera: Polycentropodidae) from Costa Rica. *Proceedings of the Entomological Society of Washington* 106: 202–216.
- Holzenthal RW (2004) Three new species of Chilean caddisflies (Insecta: Trichoptera). *Proceedings of the Entomological Society of Washington* 106: 110–117.
- Holzenthal RW (2004) Essential resources for research on the Neotropical Trichoptera fauna. *Nectopsyche, Neotropical Trichoptera Newsletter* 2: 7–9.
- Holzenthal RW, Andersen T (2004) The caddisfly genus *Triaenodes* in the Neotropics (Trichoptera: Leptoceridae). *Zootaxa* 511: 1–80. <https://doi.org/10.111646/zootaxa.511.1.1>
- Holzenthal RW, Pes AMO (2004) A new genus of long-horned caddisfly from the Amazon basin (Trichoptera: Leptoceridae: Grumichellini). *Zootaxa* 621: 1–16. <https://doi.org/10.111646/zootaxa.621.1.1>
- Johanson KA, Holzenthal RW (2004) Thirteen new species and new distribution records of *Helicopsyche* (*Feropsyche*) Johanson from Venezuela (Trichoptera: Helicopsychidae). *Zootaxa* 711: 1–40. <https://doi.org/10.111646/zootaxa.711.1.1>
- Paprocki H, Holzenthal RW, Blahnik RJ (2004) Checklist of the Trichoptera (Insecta) of Brazil I. *Biota Neotropica* 4: 1–22. <https://doi.org/10.1590/S1676-06032004000100008>

2005

- Hamilton SW, Holzenthal RW (2005) Five new species of Polycentropodidae (Trichoptera) from Ecuador and Venezuela. *Zootaxa* 810: 1–14. <https://doi.org/10.111646/zootaxa.810.1.1>
- Robertson DR, Holzenthal RW (2005) The Neotropical caddisfly genus *Tolhuaca* (Trichoptera: Glossosomatidae). *Zootaxa* 1063: 53–68. <https://doi.org/10.111646/zootaxa.1063.1.3>

2006

- Blahnik RJ, Holzenthal RW (2006) Revision of the genus *Culoptila* (Trichoptera: Glossosomatidae). *Zootaxa* 1233: 1–52. <https://doi.org/10.111646/zootaxa.1233.1.1>
- Calor AR, Holzenthal RW, Amorim DS (2006) Phylogenetic analysis of *Notalina* (*Neonotalina*) Holzenthal (Trichoptera: Leptoceridae), with the description of two new species from southeastern Brazil. *Zootaxa* 1131: 33–48. <https://doi.org/10.111646/zootaxa.1131.1.2>

- Holzenthal RW (2006) Book review: Caddisflies the underwater architects. *Journal of the North American Benthological Society* 25: 263–265. [https://doi.org/10.1899/0887-3593\(2006\)25\[263:br\]2.0.co;2](https://doi.org/10.1899/0887-3593(2006)25[263:br]2.0.co;2)
- Holzenthal RW (2006) Caddisflies, the underwater architects [book review]. *American Entomologist* 52: 199–200. <https://doi.org/10.1093/ae/52.3.199>
- Holzenthal RW, Blahnik RJ (2006) The caddisfly genus *Protoptila* in Costa Rica (Trichoptera: Glossosomatidae). *Zootaxa* 1197: 1–37. <https://doi.org/10.11646/zootaxa.1197.1.1>
- Holzenthal RW, Robertson DR (2006) Four new species of *Contulma* from South America (Trichoptera: Anomalopsychidae). *Zootaxa* 1355: 49–59. <https://doi.org/10.11747/zootaxa.1355.1.3>
- Robertson DR, Holzenthal RW (2006) The Neotropical caddisfly genus *Canoptila* (Trichoptera: Glossosomatidae). *Zootaxa* 1272: 45–59. <https://doi.org/10.11646/zootaxa.1272.1.2>

2007

- Blahnik RJ, Holzenthal RW, Prather AL (2007) The lactic acid method for clearing Trichoptera genitalia. In: Bueno-Soria J, Barba-Álvarez R, Armitage BJ (Eds) Proceedings of the 12th International Symposium on Trichoptera, Mexico City (Mexico), June 2006. The Caddis Press, Columbus, 9–14.
- Chamorro-Lacayo ML, Maes J-M, Holzenthal RW, Blahnik RJ (2007) Updated checklist of the Trichoptera of Nicaragua. In: Bueno-Soria J, Barba-Álvarez R, Armitage BJ (Eds) Proceedings of the 12th International Symposium on Trichoptera, Mexico City (Mexico), June 2006. The Caddis Press, Columbus, 37–50.
- Holzenthal RW, Andersen T (2007) Review of the caddisfly genus *Tagalopsyche* with the description of new species and a related new genus (Trichoptera: Leptoceridae: Mystacidini). *Zootaxa* 1483: 1–32. <https://doi.org/10.11646/zootaxa.1483.1.1>
- Holzenthal RW, Blahnik RJ, Kjer KM, Prather AP (2007) An update on the phylogeny of caddisflies (Trichoptera). In: Bueno-Soria J, Barba-Alvarez R, Armitage B (Eds) Proceedings of the 12th International Symposium on Trichoptera, Mexico City (Mexico), June 2006. The Caddis Press, Columbus, 143–153.
- Holzenthal RW, Blahnik RJ, Prather AL, Kjer KM (2007) Order Trichoptera Kirby, 1813 (Insecta), caddisflies. *Zootaxa* 1668: 639–698. <https://doi.org/10.11646/zootaxa.1668.1.29>
- Wasmund AM, Holzenthal RW (2007) A revision of the Neotropical caddisfly genus *Rhyacopsyche*, with the description of 13 new species (Trichoptera: Hydroptilidae). *Zootaxa* 1634: 1–59. <https://doi.org/10.11646/zootaxa.1634.1.1>

2008

- Blahnik RJ, Holzenthal RW (2008) Revision of the Mexican and Central American species of *Mortoniella* (Trichoptera: Glossosomatidae: Protoptilinae). *Zootaxa* 1711: 1–72. <https://doi.org/10.11646/zootaxa.1711.1.1>

- Bueno-Soria J, Holzenthal RW (2008) The genus *Ochrotrichia* Mosely (Trichoptera: Hydroptilidae) in Costa Rica, with the description of four new species. Zootaxa 1763: 41–54. <https://doi.org/10.11646/zootaxa.1763.1.3>
- Calor AR, Holzenthal RW (2008) Phylogeny of Grumichellini Morse, 1981 (Trichoptera: Leptoceridae) with the description of a new genus from southeastern Peru. Aquatic Insects 30: 245–259. <https://doi.org/10.1080/01650420802334087>
- Holzenthal RW (2008) Digital illustration of insects. American Entomologist 54: 218–221. <https://doi.org/10.1093/ae/54.4.218>
- Holzenthal RW, Prather AL, Marshall SA (2008) Interactive key to the aquatic insect orders of North America, CD-ROM. In: Merritt RW, Cummins KW, Berg MA (Eds) An Introduction to the Aquatic Insects of North America, 4th Edn. Kendall/Hunt, Dubuque, USA.
- Morse JC, Holzenthal RW (2008) Chapter 18, Caddisfly genera. In: Merritt RW, Cummins KW, Berg MA (Eds) An Introduction to the Aquatic Insects of North America, 4th Edn. Kendall/Hunt, Dubuque, USA, 481–552.
- Muñoz-Quesada FJ, Holzenthal RW (2008) Revision of the Nearctic species of the caddisfly genus *Wormaldia* McLachlan (Trichoptera: Philopotamidae). Zootaxa 1838: 1–75. <https://doi.org/10.11646/zootaxa.3998.1.1>
- Robertson DR, Holzenthal RW (2008) Two new species and a new record of *Protoptila* from Bolivia (Trichoptera: Glossosomatidae: Protoptilinae). Annals of the Entomological Society of America 101: 465–473. [https://doi.org/10.1603/0013-8746\(2008\)101\[465:TNSAAN\]2.0.CO;2](https://doi.org/10.1603/0013-8746(2008)101[465:TNSAAN]2.0.CO;2)

2009

- Blahnik RJ, Holzenthal RW, Huisman J (2009) *Chimarra* of Sabah and Sarawak, northern Borneo (Trichoptera: Philopotamidae). Tijdschrift voor Entomologie 152: 109–166. <https://doi.org/10.1163/22119434-900000272>.
- Holzenthal RW (2009) Trichoptera (Caddisflies). In: Likens GE (Ed.) Encyclopedia of Inland Waters Volume 2. Elsevier, Oxford, UK, 456–467.

2010

- Chamorro ML, Holzenthal RW (2010) Taxonomy and phylogeny of New World *Polyplectropus* Ulmer, 1905 (Trichoptera: Psychomyioidea: Polycentropodidae) with the description of 39 new species. Zootaxa 2582: 1–252. <https://doi.org/10.11646/zootaxa.2582.1.1>
- Holzenthal RW, Blahnik RJ (2010) Systematics of the Neotropical caddisfly genus *Notidobiella* Schmid (Trichoptera, Sericostomatidae), with the description of 3 new species. ZooKeys 71: 23–47. <https://doi.org/10.3897/zookeys.71.791>
- Holzenthal RW, Robertson DR, Pauls SU, Mendez PK (2010) Taxonomy and systematics: contributions to benthology and J-NABS. Journal of the North American Benthological Society 29: 147–169. <https://doi.org/10.1899/08-065.1>

- Houghton DC, Holzenthal RW (2010) Historical and contemporary biological diversity of Minnesota caddisflies: a case study of landscape-level species loss and trophic composition shift. *Journal of the North American Benthological Society* 29: 480–495. <https://doi.org/10.1899/09-029.1>
- Johanson KA, Holzenthal RW (2010) The snail-case caddisfly subgenus *Helicopsyche* (*Feropsycche*) in Costa Rica, with the description of 3 new species (Trichoptera: Helicopsychidae). *Zootaxa* 2689: 37–47. <https://doi.org/10.11646/zootaxa.2689.1.4>
- Pauls SU, Blahnik RJ, Zhou X, Wardwell CT, Holzenthal RW (2010) DNA barcode data confirm new species and reveal cryptic diversity in Chilean *Smicridea* (*Smicridea*) (Trichoptera: Hydropsychidae). *Journal of the North American Benthological Society* 29: 1058–1074. <https://doi.org/10.1899/09-108.1>
- Pauls SU, Holzenthal RW, Ngera MF (2010) Two new species of *Triaenodes* McLachlan 1865 from streams in the Lake Kivu basin, South Kivu, Democratic Republic of the Congo (Trichoptera, Leptoceridae). *Denisia* 29: 277–285.
- Thomson RE, Holzenthal RW (2010) New Neotropical species of the genus *Austrotinodes* Schmid (Trichoptera: Ecnomidae). *Zootaxa* 2347: 38–50. <https://doi.org/10.11646/zootaxa.2437.1.2>

2011

- Blahnik RJ, Holzenthal RW (2011) Revision of the austral South American species of *Mortoniella* (Trichoptera: Glossosomatidae: Protoptilinae). *Zootaxa* 2851: 1–75. <https://doi.org/10.11636/zootaxa.2851.1.1>
- Chamorro ML, Holzenthal RW (2011) Phylogeny of Polycentropodidae Ulmer, 1903 (Trichoptera: Annulipalpia: Psychomyioidea) inferred from larval, pupal and adult characters. *Invertebrate Systematics* 25: 219–253. <https://doi.org/10.1071/IS10024>
- Hamilton SW, Holzenthal RW (2011) Twenty-four new species of *Polycentropus* (Trichoptera, Polycentropodidae) from Brazil. *ZooKeys* 76: 1–53. <https://doi.org/10.3897/zookeys.76.790>
- Holzenthal RW, Morse JC, Kjer KM (2011) Order Trichoptera Kirby, 1813. In: Zhang Z-Q (Ed.) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. *Zootaxa* 3148: 209–211. <https://doi.org/10.11646/zootaxa.3148.1.40>
- Holzenthal RW, Rázuri-Gonzales LE (2011) A new species of *Amphoropsyche* (Trichoptera, Leptoceridae) from Ecuador, with a key to the species in the genus. *ZooKeys* 211: 59–65. <https://doi.org/10.3897/zookeys.111.813>
- Mendez PK, Holzenthal RW, Steiner JWH (2011) The Trichoptera Literature Database: a collaborative bibliographic resource for world caddisfly research. In: Maćjecka K, Majecki J, Morse J (Eds) Proceedings of the 13th International Symposium on Trichoptera, Białowieża (Poland), June 2009. Magnolia Press, Auckland, NZ, 331–337. <https://doi.org/10.11646/zoosymposia.5.1.25>

Robertson DR, Holzenthal RW (2011) Revision of the Neotropical caddisfly genus *Itaúara* Müller, 1888 (Trichoptera, Glossosomatidae). ZooKeys 114: 41–100. <https://doi.org/10.3897/zookeys.114.1405>

2012

- Blahnik RJ, Holzenthal RW (2012) New Neotropical species of *Chimarra* (Trichoptera, Philopotamidae). ZooKeys 184: 1–33. <https://doi.org/10.3897/zookeys.184.2911>
- Holzenthal RW, Ríos-Touma B (2012) *Contulma paluguillensis* (Trichoptera: Anomolopsychidae), a new caddisfly from the high Andes of Ecuador, and its natural history. Freshwater Science 31: 442–450. <https://doi.org/10.1899/11-067.1>
- Santos APM, Holzenthal RW (2012) Three new species of *Atopsyche* Banks (Trichoptera, Hydrobiosidae) from Brazil. ZooKeys 207: 65–78.
- Thomson RE, Holzenthal RW (2012) New species and records of Hydroptilidae (Trichoptera) from Venezuela. ZooKeys 185: 19–39. <https://doi.org/10.3897/zookeys.185.2909>

2013

- Robertson DR, Holzenthal RW (2013) Revision and phylogeny of the caddisfly subfamily Protoptilinae (Trichoptera: Glossosomatidae) inferred from adult morphology and mitochondrial DNA. Zootaxa 3723: 1–99. <https://doi.org/10.11646/zootaxa.3723.1.1>
- Vshivkova TS, Flint OS, Holzenthal RW, Kjer KM, Frandsen PB, Thomson RE, Egorov AB (2013) First data on Trichoptera fauna (Insecta) of streams and ponds of Vostok Bay Basin (Peter the Great Bay, Primorye Territory). In: Makarchenko EA (Ed.) Freshwater Life. Dalnauka, Vladivostok, Russia, 123–143.

2014

- Blahnik RJ, Holzenthal RW (2014) Review and redescription of species in the *Oecetis avara* group, with the description of 15 new species (Trichoptera, Leptoceridae). ZooKeys: 1–83. <https://doi.org/10.3897/zookeys.376.6047>

2015

- Armitage BJ, Harris SC, Holzenthal RW (2015) The Trichoptera of Panama I. New records for caddisflies (Insecta: Trichoptera) from the Republic of Panama. Insecta Mundi 0435: 1–10.
- Holzenthal RW, Thomson RE, Ríos-Touma B (2015) Order Trichoptera. In: Thorp JH, Rogers DC (Eds) Ecology and General Biology, Vol I: Thorp and Covich's Freshwater Invertebrates, 4th Edn. Academic Press, XXXX, 965–1002. <https://doi.org/10.1016/b978-0-12-385026-3.00038-3>

- Muñoz-Quesada FJ, Holzenthal RW (2015) Revision of the Neotropical species of the caddisfly genus *Wormaldia* McLachlan (Trichoptera: Philopotamidae). Zootaxa 3998: 1–138. <https://doi.org/10.11646/zootaxa.3998.1.1>
- Thomson RE, Holzenthal RW (2015) A revision of the Neotropical caddisfly genus *Leucotrichia* Mosely, 1934 (Hydroptilidae, Leucotrichiinae). ZooKeys 499: 1–100. <https://doi.org/10.3897/zookeys.499.8360>

2016

- Calor AR, Holzenthal RW, Froehlich CG (2016) Phylogeny and revision of the Neotropical genus *Grumicella* Müller (Trichoptera: Leptoceridae), including nine new species and a key. Zoological Journal of the Linnean Society 176: 137–169. <https://doi.org/10.1111/zoj.12310>
- Holzenthal R, Ríos-Touma B (2016) A new Ecuadorian species of the rare Neotropical caddisfly genus *Amphoropsyche* Holzenthal (Trichoptera, Leptoceridae). ZooKeys 640: 59–67. <https://doi.org/10.3897/zookeys.640.10344>
- Holzenthal RW, Blahnik RJ, Calor AR (2016) Three new species of *Helicopsyche* von Siebold (Trichoptera: Helicopsychidae) from Brazil. Zootaxa 4078: 344–353. <https://doi.org/10.11646/zootaxa.4078.1.29>
- Kjer KM, Thomas JA, Zhou X, Frandsen PB, Scott E, Holzenthal RW (2016) Progress on the phylogeny of caddisflies (Trichoptera). In: Vshivkova T, Morse JC (Eds) Proceedings of the 14th International Symposium on Trichoptera, Vladivostok (Russia), July 2012. Magnolia Press, Auckland, NZ, 248–256. <https://doi.org/10.11646/zoosymposia.10.1.23>
- Rázuri-Gonzales E, Holzenthal RW (2016) New synonyms in the highly diverse caddisfly genus *Smicridea* (Trichoptera, Hydropsychidae). ZooKeys 637: 21–31. <https://doi.org/10.3897/zookeys.637.10148>
- Vshivkova T, Flint O, Ito T, Ivanov V, Holzenthal R, Melnitsky S, Mey W, Nozaki T, Oh MW, Drozdov K, Tojo K, Saito R, Tori T (2016) The List of Caddisflies (Insecta, Trichoptera) collected in South Primorye during the symposium and post-symposium excursions of the XIV International Symposium on Trichoptera (5 and 8–13 July 2012). In: Vshivkova TS, Morse JC (Eds) Proceedings of the 14th International Symposium on Trichoptera, Vladivostok (Russia), July 2012. Magnolia Press, Auckland, NZ, 64–84. <https://doi.org/10.11646/zoosymposia.10.1.7>
- Zhou X, Frandsen PB, Holzenthal RW, Beet CR, Bennett KR, Blahnik RJ, Bonada N, Cartwright D, Chuluunbat S, Cocks GV, Collins GE, deWaard J, Dean J, Flint OS, Hausmann A, Hendrich L, Hess M, Hogg ID, Kondratieff BC, Malicky H, Milton MA, Morinière J, Morse JC, Mwangi FN, Pauls SU, Gonzalez MR, Rinne A, Robinson JL, Salokannel J, Shackleton M, Smith B, Stamatakis A, StClair R, Thomas JA, Zamora-Muñoz C, Ziesmann T, Kjer KM (2016) The Trichoptera barcode initiative: a strategy for generating a species-level Tree of Life. Philosophical Transactions of the Royal Society of London B: Biological Sciences 371: 1–11. <https://doi.org/10.1098/rstb.2016.0025>

2017

- Blahnik RJ, Holzenthal RW (2017) Revision of the northern South American species of *Mortoniella* Ulmer, 1906 (Trichoptera: Glossosomatidae: Protoptilinae). Insecta Mundi 0602: 1–250.
- Holzenthal RW, Calor AR (2017) Catalog of the Neotropical Trichoptera (Caddisflies). ZooKeys 654: 1–566. <https://doi.org/10.3897/zookeys.654.9516>
- Holzenthal RW, Ríos-Touma B, Rázuri-Gonzales E (2017) New species of the endemic Neotropical caddisfly genus *Contulma* from the Andes of Ecuador (Trichoptera: Anomalopsychidae). PeerJ 5: e3967. <https://doi.org/10.7717/peerj.3967>
- Quintero FB, Holzenthal RW (2017) Fourteen new species of *Oecetis* McLachlan, 1877 (Trichoptera: Leptoceridae) from the Neotropical region. PeerJ 5: e3753. <https://doi.org/10.7717/peerj.3753>
- Rázuri-Gonzales E, Holzenthal RW, Ríos-Touma B (2017) Two new species of the rare Neotropical caddisfly genus *Amphoropsyche* Holzenthal (Trichoptera, Leptoceridae). ZooKeys 707: 63–72. <https://doi.org/10.3897/zookeys.707.20759>
- Ríos-Touma B, Holzenthal RW, Huisman J, Thomson R, Rázuri-Gonzales E (2017) Diversity and distribution of the Caddisflies (Insecta: Trichoptera) of Ecuador. PeerJ 5: e2851. <https://doi.org/10.7717/peerj.2851>

2018

- Barcelos-Silva P, Pes AM, Andrade-Souza V, Holzenthal RW (2018) Associating larvae and adults of the Neotropical caddisfly genus *Synoestropsis* Ulmer (Trichoptera: Hydropsychidae) using morphology and DNA mitochondrial sequences. Zoolo- gischer Anzeiger 277: 169–189. <https://doi.org/10.1016/j.jcz.2018.08.002>
- Holzenthal R, Blahnik RJ, Ríos-Touma B (2018) New species and a new genus of Philopotamidae from the Andes of Bolivia and Ecuador (Insecta, Trichoptera). ZooKeys 780: 89–108. <https://doi.org/10.3897/zookeys.780.26977>
- Holzenthal RW, Ríos-Touma B (2018) Nectopsyche of Ecuador: a new species from the high Andean páramo and redescription of *Nectopsyche spiloma* (Ross) (Trichop- tera: Leptoceridae). PeerJ 6: e4981. <https://doi.org/10.7717/peerj.4981>
- Pes AM, Holzenthal RW, Sganga JV, Santos APM, Barcelos-Silva P, Camargos LM (2018) Order Trichoptera. In: Hamada N, Thorp JH, Rogers DC (Eds) Keys to Neotropical Hexapoda, Thorp and Covich's Freshwater Invertebrates - Volume III, 4th Ed. Academic Press, London, 237–324. <https://doi.org/10.1016/B978-0-12-804223-6.00010-X>
- Rázuri-Gonzales E, Holzenthal RW, Ríos-Touma B (2018) New *Atanatolica* species from Ecuador (Trichoptera, Leptoceridae). ZooKeys 793: 97–114. <https://doi.org/10.3897/zookeys.793.26712>

2019

- Ngera MF, Pauls SU, Holzenthal RW, Bagalwa M, Bisimwa MA, Mushayuma EM, and Cammaerts DR. 2019. Contribution to the knowledge of the macroinvertebrate

fauna of the streams of Kahuzi-Biega National Park, Democratic Republic of Congo. African Journal of Aquatic Science 44: 127–142. <https://doi.org/10.2989/16085914.2019.1598840>

2020

Thomas JA, Frandsen PB, Prendini E, Zhou X, Holzenthal RW (2020) A multigene phylogeny and timeline for Trichoptera (Insecta). Systematic Entomology 45: 670–686. <https://doi.org/10.1111/syen.12422>

Vilarino A, Holzenthal RW (2020) Systematic revision of the caddisfly genus *Machairocentron* Schmid (Trichoptera: Psychomyioidea: Xiphocentronidae). Insect Systematics & Evolution 52: 375–411. <https://doi.org/10.1163/1876312X-bja10013>

2021

Olsen LK, Heckenhauer J, Sproul JS, Dikow RB, Gonzalez VL, Kweskin MP, Taylor AM, Wilson SB, Stewart RJ, Zhou X, Holzenthal R, Pauls SU, Frandsen PB (2021) Draft Genome Assemblies and Annotations of *Agrypnia vestita* Walker, and *Hesperophylax magnus* Banks Reveal Substantial Repetitive Element Expansion in Tube Case-Making Caddisflies (Insecta: Trichoptera). Genome Biology and Evolution 13(3): evab013. <https://doi.org/10.1093/gbe/evab013>

Ríos-Touma B, Holzenthal RW, Rázuri-Gonzales E, Heckenhauer J, Pauls SU, Storer CG, Frandsen PB (2021) De Novo Genome Assembly and Annotation of an Andean Caddisfly, *Atopsyche davidsoni* Sykora, 1991, a Model for Genome Research of High-Elevation Adaptations. Genome Biology and Evolution 14(1): evab286. <https://doi.org/10.1093/gbe/evab286>

New genera and subgenera circumscribed by R.W. Holzenthal

Achoropsyche Holzenthal, 1984

Amazonatolica Holzenthal & Pes, 2004

Amphoropsyche Holzenthal, 1985

Aymaradella Holzenthal, Blahnik & Ríos-Touma, 2018

Fernandoschmidia Holzenthal & Andersen, 2007

Mejicanotrichia Harris & Holzenthal, 1997

Mortoniella (*Nanotrichia*) Blahnik & Holzenthal, 2017

Neoathripsodes Holzenthal, 1989

Notalina (*Neonotalina*) Holzenthal, 1986

Orinochotrichia Harris, Flint & Holzenthal, 2002

Osflintia Calor & Holzenthal, 2008

Tizatetrichia Harris, Flint & Holzenthal, 2002

New species described by R.W. Holzenthal (arranged alphabetically by family and species)**Anomalopsychidae**

- Contulma adamsae* Holzenthal & Flint, 1995
Contulma bacula Holzenthal & Flint, 1995
Contulma boliviensis Holzenthal & Robertson, 2006
Contulma caldensis Holzenthal & Flint, 1995
Contulma cataracta Holzenthal & Flint, 1995
Contulma colombiensis Holzenthal & Flint, 1991
Contulma costaricensis Holzenthal & Flint, 1995
Contulma echinata Holzenthal & Flint, 1995
Contulma ecuadorensis Holzenthal & Flint, 1995
Contulma fluminensis Holzenthal & Robertson, 2006
Contulma inornata Holzenthal & Flint, 1995
Contulma lanceolata Holzenthal & Flint, 1995
Contulma lina Holzenthal, Ríos-Touma & Rázuri-Gonzales, 2017
Contulma meloi Holzenthal & Robertson, 2006
Contulma nevada Holzenthal & Flint, 1995
Contulma paluguillensis Holzenthal & Ríos-Touma, 2012
Contulma papallacta Holzenthal & Flint, 1995
Contulma penai Holzenthal & Flint, 1995
Contulma quito Holzenthal, Ríos-Touma & Rázuri-Gonzales, 2017
Contulma sancta Holzenthal & Flint, 1995
Contulma sangay Holzenthal, Ríos-Touma & Rázuri-Gonzales, 2017
Contulma spinosa Holzenthal & Flint, 1991
Contulma talamanca Holzenthal & Flint, 1995
Contulma tapanti Holzenthal & Flint, 1995
Contulma tica Holzenthal & Flint, 1995
Contulma tijuca Holzenthal & Flint, 1995
Contulma tripui Holzenthal & Robertson, 2006
Contulma valverdei Holzenthal & Flint, 1995

Ecnomidae

- Austrotinodes abrachium* Thomson & Holzenthal, 2010
Austrotinodes belchioris Thomson & Holzenthal, 2010
Austrotinodes boliviensis Thomson & Holzenthal, 2010
Austrotinodes cressae Thomson & Holzenthal, 2010
Austrotinodes doublesi Munioz-Quesada & Holzenthal, 1993
Austrotinodes inbio Munioz-Quesada & Holzenthal, 1993
Austrotinodes longispinum Thomson & Holzenthal, 2010
Austrotinodes taquaralis Thomson & Holzenthal, 2010

Glossosomatidae

- Canoptila williami* Robertson & Holzenthal, 2006
Culoptila bidentata Blahnik & Holzenthal, 2006
Culoptila buenoi Blahnik & Holzenthal, 2006
Culoptila cascada Blahnik & Holzenthal, 2006
Culoptila hamata Blahnik & Holzenthal, 2006
Culoptila pararusia Blahnik & Holzenthal, 2006
Culoptila plummerensis Blahnik & Holzenthal, 2006
Culoptila tapanti Blahnik & Holzenthal, 2006
Culoptila unispina Blahnik & Holzenthal, 2006
Culoptila vexillifera Blahnik & Holzenthal, 2006
Itauara alexanderi Robertson & Holzenthal, 2011
Itauara bidentata Robertson & Holzenthal, 2011
Itauara blahniki Robertson & Holzenthal, 2011
Itauara charlotta Robertson & Holzenthal, 2011
Itauara emilia Robertson & Holzenthal, 2011
Itauara flinti Robertson & Holzenthal, 2011
Itauara guyanensis Robertson & Holzenthal, 2011
Itauara jamesii Robertson & Holzenthal, 2011
Itauara julia Robertson & Holzenthal, 2011
Itauara lucinda Robertson & Holzenthal, 2011
Itauara ovis Robertson & Holzenthal, 2011
Itauara peruvensis Robertson & Holzenthal, 2011
Itauara rodmani Robertson & Holzenthal, 2011
Itauara simplex Robertson & Holzenthal, 2011
Itauara spiralis Robertson & Holzenthal, 2011
Itauara stella Robertson & Holzenthal, 2011
Itauara tusci Robertson & Holzenthal, 2011
Itauara unidentata Robertson & Holzenthal, 2011
Mastigoptila complicornuta Holzenthal, 2004
Mastigoptila elae Holzenthal, 2004
Mortoniella acauda Blahnik & Holzenthal, 2011
Mortoniella acutiterga Blahnik & Holzenthal, 2017
Mortoniella adamsae Blahnik & Holzenthal, 2017
Mortoniella agosta Blahnik & Holzenthal, 2011
Mortoniella akantha Blahnik & Holzenthal, 2008
Mortoniella akrogeneios Blahnik & Holzenthal, 2017
Mortoniella anakantha Blahnik & Holzenthal, 2008
Mortoniella applanata Blahnik & Holzenthal, 2017
Mortoniella asymmetris Blahnik & Holzenthal, 2011
Mortoniella auricularis Blahnik & Holzenthal, 2017
Mortoniella aviceps Blahnik & Holzenthal, 2008

- Mortoniella barinasi* Blahnik & Holzenthal, 2017
Mortoniella biramosa Blahnik & Holzenthal, 2017
Mortoniella bocaina Blahnik & Holzenthal, 2011
Mortoniella bothrops Blahnik & Holzenthal, 2017
Mortoniella brachyrhachos Blahnik & Holzenthal, 2008
Mortoniella brevis Blahnik & Holzenthal, 2017
Mortoniella buenoi Blahnik & Holzenthal, 2008
Mortoniella bulbosa Blahnik & Holzenthal, 2017
Mortoniella carinula Blahnik & Holzenthal, 2008
Mortoniella catherinae Blahnik & Holzenthal, 2017
Mortoniella caudicula Blahnik & Holzenthal, 2008
Mortoniella chalalan Blahnik & Holzenthal, 2017
Mortoniella cognata Blahnik & Holzenthal, 2017
Mortoniella coheni Blahnik & Holzenthal, 2017
Mortoniella cornuta Blahnik & Holzenthal, 2017
Mortoniella crescentis Blahnik & Holzenthal, 2011
Mortoniella cressae Blahnik & Holzenthal, 2017
Mortoniella croca Blahnik & Holzenthal, 2017
Mortoniella curtispina Blahnik & Holzenthal, 2017
Mortoniella curvistylus Blahnik & Holzenthal, 2017
Mortoniella dentiterga Blahnik & Holzenthal, 2017
Mortoniella dinotes Blahnik & Holzenthal, 2017
Mortoniella dolonis Blahnik & Holzenthal, 2011
Mortoniella draconis Blahnik & Holzenthal, 2017
Mortoniella emarginata Blahnik & Holzenthal, 2017
Mortoniella esrossi Blahnik & Holzenthal, 2017
Mortoniella falcicula Blahnik & Holzenthal, 2008
Mortoniella flexuosa Blahnik & Holzenthal, 2017
Mortoniella froehlichi Blahnik & Holzenthal, 2011
Mortoniella furcula Blahnik & Holzenthal, 2017
Mortoniella gilli Blahnik & Holzenthal, 2017
Mortoniella gracilis Blahnik & Holzenthal, 2017
Mortoniella grandiloba Blahnik & Holzenthal, 2017
Mortoniella guahybae Blahnik & Holzenthal, 2011
Mortoniella guyanensis Blahnik & Holzenthal, 2017
Mortoniella hamata Blahnik & Holzenthal, 2017
Mortoniella hystricosa Blahnik & Holzenthal, 2011
Mortoniella intervalles Blahnik & Holzenthal, 2011
Mortoniella langleyae Blahnik & Holzenthal, 2017
Mortoniella latispina Blahnik & Holzenthal, 2011
Mortoniella licina Blahnik & Holzenthal, 2017
Mortoniella longispina Blahnik & Holzenthal, 2011
Mortoniella longiterga Blahnik & Holzenthal, 2017

- Mortoniella meloi* Blahnik & Holzenthal, 2011
Mortoniella membranacea Blahnik & Holzenthal, 2017
Mortoniella mexicana Blahnik & Holzenthal, 2008
Mortoniella monopodis Blahnik & Holzenthal, 2017
Mortoniella munozi Blahnik & Holzenthal, 2008
Mortoniella opinionis Blahnik & Holzenthal, 2008
Mortoniella panamensis Blahnik & Holzenthal, 2008
Mortoniella papillata Blahnik & Holzenthal, 2008
Mortoniella paraguaiensis Blahnik & Holzenthal, 2011
Mortoniella parameralda Blahnik & Holzenthal, 2017
Mortoniella parauna Blahnik & Holzenthal, 2011
Mortoniella paraunota Blahnik & Holzenthal, 2011
Mortoniella paucispina Blahnik & Holzenthal, 2017
Mortoniella pectinella Blahnik & Holzenthal, 2008
Mortoniella pica Blahnik & Holzenthal, 2017
Mortoniella proakantha Blahnik & Holzenthal, 2017
Mortoniella prolata Blahnik & Holzenthal, 2017
Mortoniella propinqua Blahnik & Holzenthal, 2008
Mortoniella pumila Blahnik & Holzenthal, 2011
Mortoniella pusilla Blahnik & Holzenthal, 2011
Mortoniella quadrifidactyla Blahnik & Holzenthal, 2017
Mortoniella quadrispina Blahnik & Holzenthal, 2017
Mortoniella rectiflexa Blahnik & Holzenthal, 2017
Mortoniella redundca Blahnik & Holzenthal, 2008
Mortoniella rodmani Blahnik & Holzenthal, 2008
Mortoniella ruedae Blahnik & Holzenthal, 2017
Mortoniella schlingeri Blahnik & Holzenthal, 2017
Mortoniella sicula Blahnik & Holzenthal, 2008
Mortoniella silacea Blahnik & Holzenthal, 2017
Mortoniella simplicis Blahnik & Holzenthal, 2017
Mortoniella sinuosa Blahnik & Holzenthal, 2017
Mortoniella spangleri Blahnik & Holzenthal, 2017
Mortoniella spatulata Blahnik & Holzenthal, 2017
Mortoniella stilula Blahnik & Holzenthal, 2008
Mortoniella tanyrhabdos Blahnik & Holzenthal, 2017
Mortoniella tapanti Blahnik & Holzenthal, 2008
Mortoniella taurina Blahnik & Holzenthal, 2008
Mortoniella triangularis Blahnik & Holzenthal, 2017
Mortoniella tridens Blahnik & Holzenthal, 2017
Mortoniella tripuiensis Blahnik & Holzenthal, 2011
Mortoniella triramosa Blahnik & Holzenthal, 2017
Mortoniella truncata Blahnik & Holzenthal, 2011
Mortoniella tusci Blahnik & Holzenthal, 2017

- Mortoniella umbonata* Blahnik & Holzenthal, 2008
Mortoniella uruguaiensis Blahnik & Holzenthal, 2011
Mortoniella variabilis Blahnik & Holzenthal, 2017
Mortoniella venezuelensis Blahnik & Holzenthal, 2017
Mortoniella zamora Blahnik & Holzenthal, 2017
Protoptila altura Holzenthal & Blahnik, 2006
Protoptila bribri Holzenthal & Blahnik, 2006
Protoptila chitaria Holzenthal & Blahnik, 2006
Protoptila cristula Holzenthal & Blahnik, 2006
Protoptila diablita Robertson & Holzenthal, 2008
Protoptila jolandae Holzenthal & Blahnik, 2006
Protoptila julieta Robertson & Holzenthal, 2008
Protoptila kjeri Holzenthal & Blahnik, 2006
Protoptila strepsicera Holzenthal & Blahnik, 2006
Protoptila trichoglossa Holzenthal & Blahnik, 2006
Tolhuaca brasiliensis Robertson & Holzenthal, 2005

Helicopsychidae

- Helicopsyche alajuela* Johanson & Holzenthal, 2010
Helicopsyche angeloi Holzenthal, Blahnik & Calor, 2016
Helicopsyche auroa Johanson & Holzenthal, 2004
Helicopsyche camuriensis Johanson & Holzenthal, 2004
Helicopsyche circulata Johanson & Holzenthal, 2004
Helicopsyche disjuncta Johanson & Holzenthal, 2004
Helicopsyche dorsocurvata Johanson & Holzenthal, 2010
Helicopsyche golfitoensis Johanson & Holzenthal, 2010
Helicopsyche guara Holzenthal, Blahnik & Calor, 2016
Helicopsyche laneblina Johanson & Holzenthal, 2004
Helicopsyche lara Johanson & Holzenthal, 2004
Helicopsyche lazzariae Holzenthal, Blahnik & Calor, 2016
Helicopsyche linabena Johanson & Holzenthal, 2004
Helicopsyche neblinensis Johanson & Holzenthal, 2004
Helicopsyche perija Johanson & Holzenthal, 2004
Helicopsyche succincta Johanson & Holzenthal, 2004
Helicopsyche sucrensis Johanson & Holzenthal, 2004
Helicopsyche tachira Johanson & Holzenthal, 2004
Helicopsyche venezuelensis Johanson & Holzenthal, 2004

Hydrobiosidae

- Atopsyche allani* Holzenthal & Cressa, 2002
Atopsyche blahniki Santos & Holzenthal, 2012

Atopsyche galharada Santos & Holzenthal, 2012

Atopsyche parauna Santos & Holzenthal, 2012

Atopsyche rinconi Holzenthal & Cressa, 2002

Atopsyche segnini Holzenthal & Cressa, 2002

Hydropsychidae

Smicridea figueroai Holzenthal, 2004

Smicridea lourditae Pauls, Blahnik, Zhou, Wardwell & Holzenthal, 2010

Smicridea nemorosa Holzenthal & Blahnik, 1995

Smicridea patinae Pauls, Blahnik & Holzenthal, 2010

Smicridea singri Holzenthal & Blahnik, 1995

Smicridea tapanti Holzenthal & Blahnik, 1995

Smicridea travertinera Paprocki, Holzenthal & Cressa, 2003

Hydroptilidae

Alisotrichia tiza Harris & Holzenthal, 1993

Angrisanoia otarosa Wasmund & Holzenthal, 2007

Angrisanoia shorti Thomson & Holzenthal, 2012

Bredinia alza Harris, Holzenthal & Flint, 2002

Bredinia davenporti Harris, Holzenthal & Flint, 2002

Bredinia emarginata Harris, Holzenthal & Flint, 2002

Bredinia espinosa Harris, Holzenthal & Flint, 2002

Bredinia guanacasteca Harris, Holzenthal & Flint, 2002

Bredinia manabiensis Harris, Holzenthal & Flint, 2002

Bredinia mexicana Harris, Holzenthal & Flint, 2002

Bredinia pilcopata Harris, Holzenthal & Flint, 2002

Bredinia selva Harris, Holzenthal & Flint, 2002

Bredinia spangleri Harris, Holzenthal & Flint, 2002

Bredinia sucrensis Harris, Holzenthal & Flint, 2002

Bredinia venezuelensis Harris, Holzenthal & Flint, 2002

Bredinia zulia Harris, Holzenthal & Flint, 2002

Byrsopteryx abrelata Harris & Holzenthal, 1994

Byrsopteryx chaconi Harris & Holzenthal, 1994

Byrsopteryx cuchilla Harris & Holzenthal, 1994

Byrsopteryx esparta Harris & Holzenthal, 1994

Byrsopteryx espinhosa Harris & Holzenthal, 1994

Byrsopteryx gomezi Harris & Holzenthal, 1994

Byrsopteryx loja Harris & Holzenthal, 1994

Byrsopteryx rayada Harris & Holzenthal, 1994

Byrsopteryx solisi Harris & Holzenthal, 1994

Byrsopteryx tapanti Harris & Holzenthal, 1994

- Byrsopteryx tica* Harris & Holzenthal, 1994
Costatrichia carara Holzenthal & Harris, 1999
Costatrichia cressae Holzenthal & Harris, 1999
Costatrichia flinti Holzenthal & Harris, 1999
Flintiella alajuela Harris, Flint & Holzenthal, 2002
Flintiella astilla Harris, Flint & Holzenthal, 2002
Flintiella boracea Harris, Flint & Holzenthal, 2002
Flintiella heredia Harris, Flint & Holzenthal, 2002
Flintiella panamensis Harris, Flint & Holzenthal, 2002
Flintiella pizotensis Harris, Flint & Holzenthal, 2002
Flintiella tamaulipasa Harris, Flint & Holzenthal, 2002
Flintiella yanamona Harris, Flint & Holzenthal, 2002
Hydroptila carara Harris & Holzenthal, 1999
Hydroptila carolae Holzenthal & Kelley, 1983
Hydroptila cressae Thomson & Holzenthal, 2012
Hydroptila disgalera Holzenthal & Kelley, 1983
Hydroptila maritza Harris & Holzenthal, 1999
Hydroptila maza Harris & Holzenthal, 1999
Hydroptila nusagandia Harris & Holzenthal, 1999
Hydroptila osa Harris & Holzenthal, 1999
Hydroptila ouachita Holzenthal & Kelley, 1983
Hydroptila paradenza Harris & Holzenthal, 1999
Hydroptila poirrieri Holzenthal & Kelley, 1983
Hydroptila rastrilla Harris & Holzenthal, 1999
Hydroptila roberta Hamilton & Holzenthal, 1984
Hydroptila singri Harris & Holzenthal, 1999
Hydroptila tridentata Holzenthal & Kelley, 1983
Leucotrichia angelinae Thomson & Holzenthal, 2015
Leucotrichia denticulata Thomson & Holzenthal, 2015
Leucotrichia dianae Thomson & Holzenthal, 2015
Leucotrichia fulminea Thomson & Holzenthal, 2015
Leucotrichia hispida Thomson & Holzenthal, 2015
Leucotrichia kateae Thomson & Holzenthal, 2015
Leucotrichia pectinata Thomson & Holzenthal, 2015
Leucotrichia repanda Thomson & Holzenthal, 2015
Leucotrichia rhomba Thomson & Holzenthal, 2015
Leucotrichia riostoumae Thomson & Holzenthal, 2015
Leucotrichia sidneyi Thomson & Holzenthal, 2015
Leucotrichia tapantia Thomson & Holzenthal, 2015
Leucotrichia zopilote Holzenthal & Harris, 1999
Mayatrichia illobia Harris & Holzenthal, 1990
Mejicanotrichia estaquillosa Harris & Holzenthal, 1997
Metricchia acicula Bueno-Soria & Holzenthal, 2003

- Metricchia alajuela* Bueno-Soria & Holzenthal, 2003
Metricchia amplitudinis Bueno-Soria & Holzenthal, 2003
Metricchia ancora Bueno-Soria & Holzenthal, 2003
Metricchia angulosa Bueno-Soria & Holzenthal, 2003
Metricchia bostrychion Thomson & Holzenthal, 2012
Metricchia decora Bueno-Soria & Holzenthal, 2003
Metricchia gordita Bueno-Soria & Holzenthal, 2003
Metricchia luna Bueno-Soria & Holzenthal, 2003
Metricchia magna Bueno-Soria & Holzenthal, 2003
Metricchia mechuda Bueno-Soria & Holzenthal, 2003
Metricchia meta Bueno-Soria & Holzenthal, 2003
Metricchia picuda Bueno-Soria & Holzenthal, 2003
Metricchia prolata Bueno-Soria & Holzenthal, 2003
Metricchia pseudopatagonica Bueno-Soria & Holzenthal, 2003
Metricchia savegra Bueno-Soria & Holzenthal, 2003
Metricchia separata Bueno-Soria & Holzenthal, 2003
Metricchia sesquipedalis Bueno-Soria & Holzenthal, 2003
Metricchia spica Bueno-Soria & Holzenthal, 2003
Metricchia triquetra Bueno-Soria & Holzenthal, 2003
Metricchia truncata Bueno-Soria & Holzenthal, 2003
Nothotrichia munozii Holzenthal & Harris, 2002
Nothotrichia tupi Holzenthal & Harris, 2022
Ochrotrichia affinis Bueno-Soria & Holzenthal, 2004
Ochrotrichia alargada Bueno-Soria & Holzenthal, 2004
Ochrotrichia amorfa Bueno-Soria & Holzenthal, 2004
Ochrotrichia assita Bueno-Soria & Holzenthal, 2004
Ochrotrichia avicula Bueno-Soria & Holzenthal, 2008
Ochrotrichia avis Bueno-Soria & Holzenthal, 1998
Ochrotrichia bractea Bueno-Soria & Holzenthal, 2004
Ochrotrichia catarina Bueno-Soria & Holzenthal, 2004
Ochrotrichia citra Bueno-Soria & Holzenthal, 2004
Ochrotrichia compacta Bueno-Soria & Holzenthal, 2004
Ochrotrichia conformalis Bueno-Soria & Holzenthal, 2008
Ochrotrichia curvata Bueno-Soria & Holzenthal, 2004
Ochrotrichia cuspidata Bueno-Soria & Holzenthal, 2004
Ochrotrichia delgada Bueno-Soria & Holzenthal, 2004
Ochrotrichia dulcea Bueno-Soria & Holzenthal, 1998
Ochrotrichia indefinida Bueno-Soria & Holzenthal, 2004
Ochrotrichia involuta Bueno-Soria & Holzenthal, 2004
Ochrotrichia ixtlahuaca Bueno-Soria & Holzenthal, 2004
Ochrotrichia jolandae Bueno-Soria & Holzenthal, 2008
Ochrotrichia leona Bueno-Soria & Holzenthal, 2004
Ochrotrichia longispina Bueno-Soria & Holzenthal, 2004

- Ochrotrichia membrana* Bueno-Soria & Holzenthal, 1998
Ochrotrichia patulosa Wasmund & Holzenthal, 2007
Ochrotrichia quasi Bueno-Soria & Holzenthal, 2008
Ochrotrichia quebrada Bueno-Soria & Holzenthal, 1998
Ochrotrichia quinealensis Bueno-Soria & Holzenthal, 1998
Ochrotrichia ramona Bueno-Soria & Holzenthal, 1998
Ochrotrichia regiomontana Bueno-Soria & Holzenthal, 2004
Ochrotrichia silva Bueno-Soria & Holzenthal, 1998
Ochrotrichia spina Bueno-Soria & Holzenthal, 2004
Ochrotrichia spinula Bueno-Soria & Holzenthal, 2004
Ochrotrichia spira Thomson & Holzenthal, 2012
Ochrotrichia unicornia Bueno-Soria & Holzenthal, 2004
Ochrotrichia vieja Bueno-Soria & Holzenthal, 1998
Ochrotrichia yavesia Bueno-Soria & Holzenthal, 2004
Orinocotrichia calcariga Harris, Flint & Holzenthal, 2002
Oxyethira apinolada Holzenthal & Harris, 1992
Oxyethira bettyae Thomson & Holzenthal, 2012
Oxyethira cuernuda Holzenthal & Harris, 1992
Oxyethira culebra Holzenthal & Harris, 1992
Oxyethira espinada Holzenthal & Harris, 1992
Oxyethira hilosa Holzenthal & Harris, 1992
Oxyethira itascae Monson & Holzenthal, 1993
Oxyethira kingi Holzenthal & Kelley, 1983
Oxyethira quiramae Thomson & Holzenthal, 2012
Oxyethira rareza Holzenthal & Harris, 1992
Oxyethira redundca Thomson & Holzenthal, 2012
Oxyethira sencilla Holzenthal & Harris, 1992
Oxyethira sierruca Holzenthal & Harris, 1992
Oxyethira tica Holzenthal & Harris, 1992
Rhyacopsyche benwa Wasmund & Holzenthal, 2007
Rhyacopsyche bulbosa Wasmund & Holzenthal, 2007
Rhyacopsyche colei Wasmund & Holzenthal, 2007
Rhyacopsyche colombiana Wasmund & Holzenthal, 2007
Rhyacopsyche colubrinosa Wasmund & Holzenthal, 2007
Rhyacopsyche dikrosa Wasmund & Holzenthal, 2007
Rhyacopsyche flinti Wasmund & Holzenthal, 2007
Rhyacopsyche hasta Wasmund & Holzenthal, 2007
Rhyacopsyche intraspira Wasmund & Holzenthal, 2007
Rhyacopsyche rhamphisa Wasmund & Holzenthal, 2007
Rhyacopsyche tanylobosa Wasmund & Holzenthal, 2007
Tizatetrichia costaricensis Harris, Flint & Holzenthal, 2002
Tupiniquintrichia procera Thomson & Holzenthal, 2015

Lepidostomatidae

- Lepidostoma chiriquiense* Holzenthal & Strand, 1992
Lepidostoma ectopium Holzenthal & Strand, 1992
Lepidostoma polylepidum Holzenthal & Strand, 1992
Lepidostoma tapanti Holzenthal & Strand, 1992
Lepidostoma xolotl Holzenthal & Strand, 1992

Leptoceridae

- Adicella uuuensis* Andersen & Holzenthal, 2002
Amazonatolica hamadae Holzenthal & Oliveira Pes, 2004
Amphoropsyche aragua Holzenthal, 1985
Amphoropsyche ayura Holzenthal, 1985
Amphoropsyche carchi Rázuri-Gonzales, Holzenthal & Ríos-Touma, 2017
Amphoropsyche cauca Holzenthal, 1985
Amphoropsyche choco Holzenthal, 1985
Amphoropsyche flinti Holzenthal, 1985
Amphoropsyche matsigenka Rázuri-Gonzales, Holzenthal & Ríos-Touma, 2017
Amphoropsyche napo Holzenthal, 1985
Amphoropsyche quebrada Holzenthal, 1985
Amphoropsyche real Holzenthal, 2016
Amphoropsyche refugia Holzenthal, 1985
Amphoropsyche spinifera Holzenthal, 1986
Amphoropsyche stellata Holzenthal, 1985
Amphoropsyche tandayapa Holzenthal & Rázuri-Gonzales, 2011
Atanatolica acuminata Holzenthal, 1988
Atanatolica andina Rázuri-Gonzales, Holzenthal & Ríos-Touma, 2018
Atanatolica angulata Rázuri-Gonzales, Holzenthal & Ríos-Touma, 2018
Atanatolica aurea Holzenthal, 1988
Atanatolica caldas Holzenthal, 1988
Atanatolica choco Holzenthal, 1988
Atanatolica cotopaxi Holzenthal, 1988
Atanatolica curvata Rázuri-Gonzales, Holzenthal & Ríos-Touma, 2018
Atanatolica decouxi Rázuri-Gonzales, Holzenthal & Ríos-Touma, 2018
Atanatolica flinti Holzenthal, 2018
Atanatolica manabi Holzenthal, 2018
Atanatolica moseleyi Denning & Holzenthal, 1988
Atanatolica muyupampa Holzenthal, 2018
Atanatolica nigra Holzenthal, 2018
Atanatolica nivea Holzenthal, 2018
Atanatolica panamensis Holzenthal, 2018
Atanatolica penai Holzenthal, 2018

- Atanatolica zongo* Holzenthal, 2018
Fernandoschmidia amudita Holzenthal & Andersen, 2007
Fernandoschmidia aramaniya Holzenthal & Andersen, 2007
Grumichella blahniki Calor & Holzenthal, 2016
Grumichella boracea Calor & Holzenthal, 2016
Grumichella cressae Calor & Holzenthal, 2016
Grumichella jureia Calor & Holzenthal, 2016
Grumichella leccii Calor & Holzenthal, 2016
Grumichella muellieri Calor & Holzenthal, 2016
Grumichella paprockii Calor & Holzenthal, 2016
Grumichella parati Calor & Holzenthal, 2016
Grumichella trujilloi Calor & Holzenthal, 2016
Nectopsyche exophthalma Holzenthal, 1995
Nectopsyche monticola Holzenthal, 1995
Nectopsyche navasi Holzenthal, 2000
Nectopsyche onyx Holzenthal, 1995
Nectopsyche ortizi Holzenthal, 1995
Nectopsyche padrenavasi Holzenthal, 2000
Nectopsyche tapanti Holzenthal, 1995
Nectopsyche tuanis Holzenthal, 1995
Nectopsyche utleyorum Holzenthal, 1995
Neoathripsodes anomalus Holzenthal, 1989
Neoatriplectides froehlichi Holzenthal, 1997
Notalina brasiliiana Holzenthal, 1986
Notalina cipo Holzenthal, 1986
Notalina froehlichi Calor & Holzenthal, 2006
Notalina hamiltoni Holzenthal, 1986
Notalina matthiasi Holzenthal, 1986
Notalina morsei Holzenthal, 1986
Notalina nanay Holzenthal, 1986
Notalina paulista Calor & Holzenthal, 2006
Notalina roraima Holzenthal, 1986
Oecetis acciptrina Blahnik & Holzenthal, 2014
Oecetis acuticlasper Quinteiro & Holzenthal, 2017
Oecetis agosta Blahnik & Holzenthal, 2014
Oecetis angularis Blahnik & Holzenthal, 2014
Oecetis apache Blahnik & Holzenthal, 2014
Oecetis bidigitata Quinteiro & Holzenthal, 2017
Oecetis blahniki Quinteiro & Holzenthal, 2017
Oecetis calorii Quinteiro & Holzenthal, 2017
Oecetis campana Blahnik & Holzenthal, 2014
Oecetis carinata Quinteiro & Holzenthal, 2017
Oecetis cassicoleata Quinteiro & Holzenthal, 2017

- Oecetis constricta* Blahnik & Holzenthal, 2014
Oecetis flinti Quinteiro & Holzenthal, 2017
Oecetis gibbosa Quinteiro & Holzenthal, 2017
Oecetis hastapulla Quinteiro & Holzenthal, 2017
Oecetis houghtoni Blahnik & Holzenthal, 2014
Oecetis licina Quinteiro & Holzenthal, 2017
Oecetis machaera Quinteiro & Holzenthal, 2017
Oecetis maritza Blahnik & Holzenthal, 2014
Oecetis mexicana Blahnik & Holzenthal, 2014
Oecetis patula Blahnik & Holzenthal, 2014
Oecetis pertica Quinteiro & Holzenthal, 2017
Oecetis plenuspinosa Quinteiro & Holzenthal, 2017
Oecetis protrusa Blahnik & Holzenthal, 2014
Oecetis quasipunctata Quinteiro & Holzenthal, 2017
Oecetis sordida Blahnik & Holzenthal, 2014
Oecetis tumida Blahnik & Holzenthal, 2014
Oecetis uncata Blahnik & Holzenthal, 2014
Oecetis verrucula Blahnik & Holzenthal, 2014
Osflintia manu Calor & Holzenthal, 2008
Setodes arenatus Holzenthal, 1982
Setodes dixiensis Holzenthal, 1982
Tagalopsyche apratita Holzenthal & Andersen, 2007
Tagalopsyche jolandae Holzenthal & Andersen, 2007
Tagalopsyche kjaerandseni Holzenthal & Andersen, 2007
Tagalopsyche udagama Holzenthal & Andersen, 2007
Triaenodes acanthus Holzenthal & Andersen, 2004
Triaenodes akosua Andersen & Holzenthal, 2001
Triaenodes akua Andersen & Holzenthal, 2002
Triaenodes amma Andersen & Holzenthal, 2001
Triaenodes bulupendek Andersen & Holzenthal, 1999
Triaenodes chirripo Holzenthal & Andersen, 2004
Triaenodes clauseni Holzenthal & Andersen, 2004
Triaenodes cuyotenango Holzenthal & Andersen, 2004
Triaenodes flintorum Holzenthal & Andersen, 2004
Triaenodes guadaloupe Holzenthal & Andersen, 2004
Triaenodes hansi Pauls, Holzenthal & Ngera, 2010
Triaenodes hodgesi Holzenthal & Andersen, 2004
Triaenodes hornitos Holzenthal & Andersen, 2004
Triaenodes kilambe Holzenthal & Andersen, 2004
Triaenodes kofi Andersen & Holzenthal, 2002
Triaenodes kwabena Andersen & Holzenthal, 2002
Triaenodes kwadwo Andersen & Holzenthal, 2001
Triaenodes kwaku Andersen & Holzenthal, 2002
Triaenodes kwame Andersen & Holzenthal, 2002

- Triaenodes kwasi* Andersen & Holzenthal, 2002
Triaenodes malickyi Pauls, Holzenthal & Ngera, 2010
Triaenodes mexicanus Holzenthal & Andersen, 2004
Triaenodes moncho Holzenthal & Andersen, 2004
Triaenodes morai Holzenthal & Andersen, 2004
Triaenodes nicaraguensis Holzenthal & Andersen, 2004
Triaenodes oaxacensis Holzenthal & Andersen, 2004
Triaenodes tajo Holzenthal & Andersen, 2004
Triaenodes talamanca Holzenthal & Andersen, 2004
Triaenodes tapanti Holzenthal & Andersen, 2004
Triaenodes tico Holzenthal & Andersen, 2004
Triaenodes tuxtlensis Holzenthal & Andersen, 2004
Triaenodes woldai Holzenthal & Andersen, 2004
Triplectides chilensis Holzenthal, 1988
Triplectides flintorum Holzenthal, 1988
Triplectides misionensis Holzenthal, 1988
Triplectides neblinus Holzenthal, 1988
Triplectides neotropicus Holzenthal, 1988
Triplectides nevadus Holzenthal, 1988
Triplectides tepui Holzenthal, 1988
Triplectides ultimus Holzenthal, 1988

Philopotamidae

- Chimarra amica* Blahnik & Holzenthal, 1992
Chimarra antheae Blahnik, Holzenthal & Huisman, 2009
Chimarra caduca Blahnik, Holzenthal & Huisman, 2009
Chimarra calorii Blahnik & Holzenthal, 2012
Chimarra cauca Blahnik & Holzenthal, 2012
Chimarra chanchuluni Blahnik, Holzenthal & Huisman, 2009
Chimarra colmillo Blahnik & Holzenthal, 1992
Chimarra curvipenis Blahnik & Holzenthal, 2012
Chimarra cuspidata Blahnik, Holzenthal & Huisman, 2009
Chimarra cygnus Blahnik, Holzenthal & Huisman, 2009
Chimarra danumensis Blahnik, Holzenthal & Huisman, 2009
Chimarra dejongi Blahnik, Holzenthal & Huisman, 2009
Chimarra denticula Blahnik, Holzenthal & Huisman, 2009
Chimarra desirae Blahnik & Holzenthal, 2012
Chimarra devogeli Blahnik, Holzenthal & Huisman, 2009
Chimarra drepane Blahnik, Holzenthal & Huisman, 2009
Chimarra fuiliiana Blahnik, Holzenthal & Huisman, 2009
Chimarra guanacasteca Blahnik & Holzenthal, 1992
Chimarra gyrospina Blahnik, Holzenthal & Huisman, 2009
Chimarra inchoata Blahnik & Holzenthal, 2012

- Chimarra jannekae* Blahnik, Holzenthal & Huisman, 2009
Chimarra janzeni Blahnik & Holzenthal, 1992
Chimarra jemima Blahnik & Holzenthal, 1992
Chimarra karlijnae Blahnik, Holzenthal & Huisman, 2009
Chimarra kinabaluensis Blahnik, Holzenthal & Huisman, 2009
Chimarra lambi Blahnik, Holzenthal & Huisman, 2009
Chimarra lata Blahnik & Holzenthal, 1992
Chimarra latiforceps Blahnik & Holzenthal, 2012
Chimarra liwaguensis Blahnik, Holzenthal & Huisman, 2009
Chimarra longiterga Blahnik & Holzenthal, 1992
Chimarra munozi Blahnik & Holzenthal, 1992
Chimarra nicehuh Blahnik & Holzenthal, 2012
Chimarra noloyan Blahnik, Holzenthal & Huisman, 2009
Chimarra noohi Blahnik, Holzenthal & Huisman, 2009
Chimarra onchyrrhina Blahnik & Holzenthal, 2012
Chimarra paraortiziana Blahnik & Holzenthal, 1992
Chimarra peineta Blahnik & Holzenthal, 1992
Chimarra phillipsae Blahnik, Holzenthal & Huisman, 2009
Chimarra physanoton Blahnik, Holzenthal & Huisman, 2009
Chimarra pollex Blahnik & Holzenthal, 1992
Chimarra preapicalis Blahnik, Holzenthal & Huisman, 2009
Chimarra scolops Blahnik, Holzenthal & Huisman, 2009
Chimarra silausilau Blahnik, Holzenthal & Huisman, 2009
Chimarra sinitorum Blahnik, Holzenthal & Huisman, 2009
Chimarra solisi Blahnik & Holzenthal, 1992
Chimarra soroa Blahnik & Holzenthal, 2012
Chimarra stenodactylus Blahnik, Holzenthal & Huisman, 2009
Chimarra sunima Blahnik & Holzenthal, 2012
Chimarra vantoli Blahnik, Holzenthal & Huisman, 2009
Chimarra vanwelzeni Blahnik, Holzenthal & Huisman, 2009
Chimarra ventritropis Blahnik, Holzenthal & Huisman, 2009
Chimarra virgencita Blahnik & Holzenthal, 1992
Chimarra xiphosella Blahnik, Holzenthal & Huisman, 2009
Chimarra yanura Blahnik & Holzenthal, 1992
Chimarrhodella choco Holzenthal, Blahnik & Ríos-Touma, 2018
Chimarrhodella costaricensis Blahnik & Holzenthal, 1992
Chimarrhodella flinti Blahnik & Holzenthal, 1992
Chimarrhodella pilcopata Blahnik & Holzenthal, 1992
Chimarrhodella tapanti Blahnik & Holzenthal, 1992
Chimarrhodella tobagoensis Blahnik & Holzenthal, 1992
Hydrobiosella andina Holzenthal, Blahnik & Ríos-Touma, 2018
Wormaldia andrea Munoz-Quesada & Holzenthal, 2015
Wormaldia anhelitus Munoz-Quesada & Holzenthal, 2015
Wormaldia araujoi Munoz-Quesada & Holzenthal, 2015

- Wormaldia aymara* Munoz-Quesada & Holzenthal, 2015
Wormaldia barbai Munoz-Quesada & Holzenthal, 2015
Wormaldia birneyi Munoz-Quesada & Holzenthal, 2008
Wormaldia bolivari Munoz-Quesada & Holzenthal, 2015
Wormaldia boteroi Munoz-Quesada & Holzenthal, 2015
Wormaldia buenorum Munoz-Quesada & Holzenthal, 2015
Wormaldia calderonae Munoz-Quesada & Holzenthal, 2015
Wormaldia chrismark Munoz-Quesada & Holzenthal, 2015
Wormaldia clauseni Munoz-Quesada & Holzenthal, 2008
Wormaldia contrerasi Munoz-Quesada & Holzenthal, 2015
Wormaldia cornuta Bueno-Soria & Holzenthal, 1986
Wormaldia dachiardiorum Munoz-Quesada & Holzenthal, 2015
Wormaldia eberhardi Munoz-Quesada & Holzenthal, 2015
Wormaldia flinti Munoz-Quesada & Holzenthal, 2015
Wormaldia francovilla Munoz-Quesada & Holzenthal, 2015
Wormaldia fredycarol Munoz-Quesada & Holzenthal, 2015
Wormaldia gallardoi Munoz-Quesada & Holzenthal, 2015
Wormaldia gonzalezae Munoz-Quesada & Holzenthal, 2015
Wormaldia hedamafera Munoz-Quesada & Holzenthal, 2015
Wormaldia imberti Munoz-Quesada & Holzenthal, 2015
Wormaldia imbrialis Holzenthal, Blahnik & Ríos-Touma, 2018
Wormaldia inca Munoz-Quesada & Holzenthal, 2015
Wormaldia isela Munoz-Quesada & Holzenthal, 2015
Wormaldia juarox Munoz-Quesada & Holzenthal, 2015
Wormaldia lauglo Munoz-Quesada & Holzenthal, 2015
Wormaldia luma Bueno-Soria & Holzenthal, 1986
Wormaldia machadorum Munoz-Quesada & Holzenthal, 2015
Wormaldia maesi Munoz-Quesada & Holzenthal, 2015
Wormaldia menchuae Munoz-Quesada & Holzenthal, 2015
Wormaldia monsonorum Munoz-Quesada & Holzenthal, 2015
Wormaldia navarroae Munoz-Quesada & Holzenthal, 2015
Wormaldia paprockevi Munoz-Quesada & Holzenthal, 2015
Wormaldia saboriorum Munoz-Quesada & Holzenthal, 2015
Wormaldia tarasca Bueno-Soria & Holzenthal, 1986
Wormaldia tocajoma Munoz-Quesada & Holzenthal, 2015
Wormaldia trondi Munoz-Quesada & Holzenthal, 2015
Wormaldia tupacamara Munoz-Quesada & Holzenthal, 2015
Wormaldia zunigae Munoz-Quesada & Holzenthal, 2015
Wormaldia zunigarceorum Munoz-Quesada & Holzenthal, 2015

Polycentropodidae

- Cernotina antonina* Holzenthal & de Almeida, 2003
Cernotina lazzarii Holzenthal & de Almeida, 2003

- Cernotina tiputini* Camargos, Ríos-Touma & Holzenthal, 2017
Cernotina waorani Camargos, Ríos-Touma & Holzenthal, 2017
Polycentropus acinaciformis Hamilton & Holzenthal, 2011
Polycentropus amphirhamphus Hamilton & Holzenthal, 2011
Polycentropus ancistrus Hamilton & Holzenthal, 2011
Polycentropus boraceia Hamilton & Holzenthal, 2011
Polycentropus caaete Hamilton & Holzenthal, 2011
Polycentropus cacheira Hamilton & Holzenthal, 2011
Polycentropus carioca Hamilton & Holzenthal, 2011
Polycentropus carolae Hamilton & Holzenthal, 2011
Polycentropus cheliceratus Hamilton & Holzenthal, 2011
Polycentropus cipoensis Hamilton & Holzenthal, 2011
Polycentropus cressae Hamilton & Holzenthal, 2005
Polycentropus fasthi Holzenthal & Hamilton, 1988
Polycentropus fluminensis Hamilton & Holzenthal, 2011
Polycentropus fortispinus Holzenthal & Hamilton, 1988
Polycentropus froehlichi Hamilton & Holzenthal, 2011
Polycentropus galbarada Hamilton & Holzenthal, 2011
Polycentropus graciosa Hamilton & Holzenthal, 2011
Polycentropus inusitatus Hamilton & Holzenthal, 2011
Polycentropus itatiaia Hamilton & Holzenthal, 2011
Polycentropus minero Hamilton & Holzenthal, 2011
Polycentropus neblinensis Hamilton & Holzenthal, 2005
Polycentropus nebulosus Holzenthal & Hamilton, 1988
Polycentropus paprockii Hamilton & Holzenthal, 2011
Polycentropus quadricuspidis Hamilton & Holzenthal, 2005
Polycentropus rosalyae Hamilton & Holzenthal, 2011
Polycentropus santateresae Hamilton & Holzenthal, 2011
Polycentropus silex Hamilton & Holzenthal, 2005
Polycentropus soniae Hamilton & Holzenthal, 2011
Polycentropus thaxtoni Hamilton & Holzenthal, 1986
Polycentropus tripui Hamilton & Holzenthal, 2011
Polycentropus urubici Holzenthal & De Almeida, 2003
Polycentropus verruculus Hamilton & Holzenthal, 2011
Polycentropus virginiae Hamilton & Holzenthal, 2011
Polycentropus volcanus Holzenthal & Hamilton, 1988
Polycentropus zurqui Holzenthal & Hamilton, 1988
Polyplectropus adamsae Chamorro & Holzenthal, 2010
Polyplectropus alatespinus Chamorro & Holzenthal, 2010
Polyplectropus amazonicus Chamorro & Holzenthal, 2010
Polyplectropus andinensis Chamorro & Holzenthal, 2010
Polyplectropus beccus Hamilton & Holzenthal, 2005
Polyplectropus blahniki Chamorro & Holzenthal, 2010

- Polyplectropus boliviensis* Chamorro & Holzenthal, 2010
Polyplectropus brasiliensis Chamorro & Holzenthal, 2010
Polyplectropus brborichorum Chamorro & Holzenthal, 2010
Polyplectropus clauseni Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus colombianus Chamorro & Holzenthal, 2010
Polyplectropus corniculatus Chamorro & Holzenthal, 2010
Polyplectropus cressae Chamorro & Holzenthal, 2010
Polyplectropus cuzcoensis Chamorro & Holzenthal, 2010
Polyplectropus ecuadorensis Chamorro & Holzenthal, 2010
Polyplectropus exilis Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus flintorum Chamorro & Holzenthal, 2010
Polyplectropus gaesum Chamorro & Holzenthal, 2010
Polyplectropus guyanae Chamorro & Holzenthal, 2010
Polyplectropus hollyae Chamorro & Holzenthal, 2010
Polyplectropus hymenochilus Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus hystricosus Chamorro & Holzenthal, 2010
Polyplectropus insularis Chamorro & Holzenthal, 2010
Polyplectropus juliae Chamorro & Holzenthal, 2010
Polyplectropus kanukarum Chamorro & Holzenthal, 2010
Polyplectropus kylistos Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus maculatus Chamorro & Holzenthal, 2010
Polyplectropus manuensis Chamorro & Holzenthal, 2010
Polyplectropus matatlanticus Chamorro & Holzenthal, 2010
Polyplectropus minensium Chamorro & Holzenthal, 2010
Polyplectropus novafriburgensis Chamorro & Holzenthal, 2010
Polyplectropus paradelphae Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus perpendicularis Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus peruvianus Chamorro & Holzenthal, 2010
Polyplectropus petrae Chamorro & Holzenthal, 2010
Polyplectropus pratherae Chamorro & Holzenthal, 2010
Polyplectropus profaupar Holzenthal & De Almeida, 2003
Polyplectropus puyoensis Chamorro & Holzenthal, 2010
Polyplectropus robertsonae Chamorro & Holzenthal, 2010
Polyplectropus rodmani Chamorro & Holzenthal, 2010
Polyplectropus rondoniensis Chamorro & Holzenthal, 2010
Polyplectropus tragularius Chamorro & Holzenthal, 2010
Polyplectropus tripunctatum Chamorro & Holzenthal, 2010
Polyplectropus venezolanus Chamorro & Holzenthal, 2010
Polyplectropus woldai Chamorro & Holzenthal, 2010
Polyplectropus yolanda Chamorro-Lacayo & Holzenthal, 2004
Polyplectropus zamoranoensis Chamorro & Holzenthal, 2010
Polyplectropus zuliae Chamorro & Holzenthal, 2010

Sericostomatidae

Notidobiella amazoniana Holzenthal & Blahnik, 2011

Notidobiella brasiliiana Holzenthal & Blahnik, 2011

Notidobiella ecuadorensis Holzenthal & Blahnik, 2011

Xiphocentronidae

Machairocentron chorotegae Vilarino & Holzenthal, 2020

Machairocentron eugeniarguedasae Vilarino & Holzenthal, 2020

Machairocentron kalinae Vilarino & Holzenthal, 2020

Xiphocentron moncho Munoz-Quesada & Holzenthal, 1997

Species named after R.W. Holzenthal

Alisotrichia holzenthali Santos, 2011

Alterosa holzenthali Blahnik, 2005

Anchitrichia holzenthali Oláh & Flint, 2012

Chimarra holzenthali Lago & Harris, 1987

Corydalus ralphi Martins, Azevêdo, Hamada & Contreras, 2022

Helicopsyche holzenthali Johanson, 2003

Helicopsyche ralphi Cavalcante-Silva, Pereira & Calor, 2022

Hydroptila holzenthali Sykora & Harris, 1994

Kisaura holzenthali Phander & Saini, 2014

Leucotrichia holzenthali Thomson, Armitage & Harris, 2022

Marilia holzenthali Bueno-Soria & Rojas-Ascencio, 2004

Metalype holzenthali (Schmid, 1997)

Neoathripsodes holzenthali Dias, Quinteiro & Calor, 2015

Notalina (Neonotalina) ralphi Silva Pereira, Oliveira, Robson Desidério, Calor & Hamada, 2022

Phylloicus holzenthali Prather, 2003

Polycentropus holzenthali Bueno-Soria & Hamilton, 1986

Silvatares holzenthali Rázuri-Gonzales, Ngera & Pauls, 2022

Smicridea holzenthali Flint & Denning, 1989

Smicridea ralphi Almeida & Flint, 2002

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References

- Andersen T, Holzenthal RW (2001) West African *Triaenodes* McLachlan (Trichoptera: Leptoceridae). 1. Introduction and subgenus *Triaenodella* Moseley. *Tijdschrift voor Entomologie* 144(2): 225–246. <https://doi.org/10.1163/22119434-900000088>
- Andersen T, Holzenthal RW (2002) West African *Adicella* McLachlan, 1877 (Trichoptera: Leptoceridae). In: Mey W (Ed.) Proceedings of the 10th International Symposium on Trichoptera. *Nova Supplementa Entomologica* 15: 88–95.
- Blahnik R, Andersen T (2022) New species of the genus *Chimarra* Stephens from Africa (Trichoptera, Philopotamidae) and characterization of the African groups and subgroups of the genus. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. *ZooKeys* 1111: 43–198. <https://doi.org/10.3897/zookeys.1111.77586>
- Bueno-Soria J, Vilarino A, Barba-Alvarez R, Ballesteros-Barrera C (2022) Three new species of *Xiphocentron* Brauer, 1870 (Trichoptera, Xiphocentrionidae) from Mexico. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. *ZooKeys* 1111: 199–213. <https://doi.org/10.3897/zookeys.1111.73371>
- Cavalcante-Silva A, Pereira R, Calor AR (2022) Caddisflies (Trichoptera) checklist and a new species of *Helicopsyche* von Siebold, 1856, from the Brejo de Altitude de Triunfo, a relict rainforest within the Caatinga domain, Northeast Brazil. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. *ZooKeys* 1111: 215–244. <https://doi.org/10.3897/zookeys.1111.77541>
- Chuluunbat S, Boldgiv B, Morse J (2022) Caddisflies (Trichoptera) of Mongolia: an updated checklist with faunistic and biogeographical notes. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. *ZooKeys* 1111: 245–265. <https://doi.org/10.3897/zookeys.1111.76239>
- Dallwitz MJ (1974) A flexible computer program for generating identification keys. *Systematic Zoology* 23(1): 50–57. <https://doi.org/10.2307/2412239>
- Dallwitz MJ (1980) A general system for coding taxonomic descriptions. *Taxon* 29(1): 41–46. <https://doi.org/10.2307/1219595>
- Flint Jr OS, Holzenthal RW, Harris SC (1999) Catalog of the Neotropical Caddisflies (Trichoptera). Ohio Biological Survey, Columbus, Ohio, 239 pp.
- Harris SC, Lago PK, Holzenthal RW (1982) An annotated checklist of the caddisflies (Trichoptera) of Mississippi and Southeastern Louisiana. Part II: Rhyacophiloidea. *Proceedings of the Entomological Society of Washington* 84: 509–512.
- Hennig W (1969) Die Stammesgeschichte der Insekten. Senckenberg-Buch 49: 1–436.
- Holzenthal RW (1982) The caddisfly genus *Setodes* in North America (Trichoptera: Leptoceridae). *Journal of the Kansas Entomological Society* 55: 253–271.
- Holzenthal RW (1984) Studies in Neotropical Leptoceridae (Trichoptera) I: *Achoropsyche*, a new genus. In: Morse JC (Ed.) Proceedings of the 4th International Symposium on Trichoptera. Dr. W. Junk, The Hague, 181–184.

- Holzenthal RW (2008) Digital illustration of insects. American Entomologist 54(4): 218–221.
<https://doi.org/10.1093/ae/54.4.218>
- Holzenthal RW, Calor AR (2017) Catalog of the Neotropical Trichoptera (Caddisflies). ZooKeys 654: 1–566. <https://doi.org/10.3897/zookeys.654.9516>
- Holzenthal RW, Flint Jr OS (1995) Studies of Neotropical caddisflies, LI: systematics of the Neotropical caddisfly genus *Contulma* (Trichoptera: Anomalopsychidae). Smithsonian Contributions to Zoology 575(575): 1–59. <https://doi.org/10.5479/si.00810282.575>
- Holzenthal RW, Harris SC, Lago PK (1982) An annotated checklist of the caddisflies (Trichoptera) of Mississippi and southeastern Louisiana. Part III: Limnephiloidea and conclusions. Proceedings of the Entomological Society of Washington 84: 513–520.
- Holzenthal RW, Ríos-Touma B, Rázuri-Gonzales E (2017) New species of the endemic Neotropical caddisfly genus *Contulma* from the Andes of Ecuador (Trichoptera: Anomalopsychidae). PeerJ 5: e3967. <https://doi.org/10.7717/peerj.3967>
- Holzenthal R, Blahnik RJ, Ríos-Touma B (2018) New species and a new genus of Philopotamidae from the Andes of Bolivia and Ecuador (Insecta, Trichoptera). ZooKeys 780: 89–108. <https://doi.org/10.3897/zookeys.780.26977>
- Houghton D (2022) Comparison of caddisfly (Insecta, Trichoptera) assemblages from lake and river habitats of the Huron Mountains of Michigan (USA). In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 267–286. <https://doi.org/10.3897/zookeys.1111.70195>
- Houghton DC, DeWalt RE, Hubbard T, Schmude KL, Dimick JJ, Holzenthal RW, Blahnik RJ, Snitgen JL (2022) Checklist of the caddisflies (Insecta, Trichoptera) of the Upper Midwest region of the United States. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 287–300. <https://doi.org/10.3897/zookeys.1111.72345>
- Kjer KM, Blahnik RJ, Holzenthal RW (2001) Phylogeny of Trichoptera (Caddisflies): Characterization of signal and noise within multiple datasets. Systematic Biology 50(6): 781–816. <https://doi.org/10.1080/106351501753462812>
- Lago PK, Holzenthal RW, Harris SC (1982) An annotated checklist of the caddisflies (Trichoptera) of Mississippi and Southeastern Louisiana. Part I: Introduction and Hydropsychoidea. Proceedings of the Entomological Society of Washington 84: 495–508.
- Luna-Luna AM, Califre Martins C, López-Pérez A, Ramírez-Ponce A, Contreras-Ramos A (2022) Aquatic beetle diversity from Volcán Tacaná, Mexico: altitudinal distribution pattern and biogeographical affinity of the fauna. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 301–338. <https://doi.org/10.3897/zookeys.1111.68665>
- Martins CC, de Azevêdo CAS, Hamada N, Grillet ME, Contreras-Ramos A (2022) After a decade, a new Venezuelan species of *Corydalus* Latreille (Megaloptera, Corydalidae, Corydalinae) is discovered. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 339–353. <https://doi.org/10.3897/zookeys.1111.76884>

- Ramírez-Carmona M, Barba-Álvarez R, Contreras-Ramos A, Rivas G (2022) Larval and female descriptions of *Mejicanotrichia* Harris & Holzenthal, 1997 (Trichoptera, Hydroptilidae, Leucotrichiinae) from Mexico. In: Pauls S, Thomson R, Rázuri-Gonzales E (Eds) Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 355–369. <https://doi.org/10.3897/zookeys.1111.77413>
- Rázuri-Gonzales E, Ngera MF, Pauls SU (2022) A new species of *Silvatares* (Trichoptera, Pisiuliidae) from the Democratic Republic of the Congo. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 371–380. <https://doi.org/10.3897/zookeys.1111.85307>
- Ríos-Touma B, Holzenthal RW, Huisman J, Thomson R, Rázuri-Gonzales E (2017) Diversity and distribution of the Caddisflies (Insecta: Trichoptera) of Ecuador. PeerJ 5: e2851. <https://doi.org/10.7717/peerj.2851>
- Ríos-Touma B, Encalada AC, Prat N (2022) Life history and secondary production of *Anomalouscosmoeus illiesi* Marlier, 1962 (Trichoptera, Limnephilidae) in a small stream in the northern Ecuadorian Paramo. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 381–388. <https://doi.org/10.3897/zookeys.1111.85576>
- Sganga JV, Sganga DE, Iglesias MS (2022) Review and redescription of species in the brasiliiana group of *Smicridea* (*Rhyacophylax*) (Trichoptera, Hydropsychidae, Smicrideinae): exploration of the utility of geometric morphometrics as a method for delimitation and characterization of species in the genus. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 389–412. <https://doi.org/10.3897/zookeys.1111.80961>
- Silva Pereira E, Oliveira I, Desidério GR, Calor A, Hamada N (2022) *Notalina* (*Neonotalina*) *ralphi* sp. nov. (Trichoptera, Leptoceridae), a new long-horned caddisfly from the Cerrado biome of Brazil, with new records for N. (*Neonotalina*) brasiliiana Holzenthal, 1986 and an identification key. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 413–424. <https://doi.org/10.3897/zookeys.1111.77581>
- Thomson RE, Armitage BJ, Harris SC (2022a) The Trichoptera of Panama. XIX. Additions to and a review of the genus *Leucotrichia* (Trichoptera, Hydroptilidae) in Panama. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 425–466. <https://doi.org/10.3897/zookeys.1111.77371>
- Thomson RE, Frandsen PB, Holzenthal RW (2022b) A preliminary molecular phylogeny of the family Hydroptilidae (Trichoptera): an exploration of combined targeted enrichment data and legacy sequence data. In: Pauls SU, Thomson R, Rázuri-Gonzales E (Eds) Special Issue in Honor of Ralph W. Holzenthal for a Lifelong Contribution to Trichoptera Systematics. ZooKeys 1111: 467–488. <https://doi.org/10.3897/zookeys.1111.85361>