Life at the edge: Benthic invertebrates in high altitude Andean streams
Loayza Muro, R.A.

Citation for published version (APA):
Loayza-Muro, R. A. (2013). Life at the edge: Benthic invertebrates in high altitude Andean streams
Acknowledgements

I never thought how digging out mussels in the Amazon could take me so far. That first step into a muddy swamp in 2002 steered a radical shift in my life, from parasite metabolism and tropical diseases to the ecotoxicity of metals in freshwater invertebrates. At that moment, my supervisor had offered me a PhD in molecular and biochemical parasitology at the Prince Leopold Institute of Tropical Medicine in Belgium, but I refused twice. Many times I asked myself if I made the correct decision. Now I can say without doubt I did.

One of the first articles I read on metal ecotoxicology came from a research group in the Netherlands: the AEE. After a first contact and many e-mails, Wim and Michiel helped me writing an article on the Amazon mussels. By the time of publication, they were already my promotor and co-promotor, although the official start of my PhD had to wait. As Harm told me once, I was always in the AEE’s list of ‘pendings’. For five years, Wim, Michiel, Helen and me worked hard on several proposals for funding my studies, making all kind of contacts and administrative procedures, until we finally succeeded in 2008. When I met Wim and Helen for the very first time at Schiphol airport, and later Michiel, I felt like knowing them already for a long time.

I want to express my deep gratitude to Wim Admiraal and Michiel Kraak, who always supported and encouraged me to make this PhD come true, even before knowing each other in person. You made these four years an inspiring and rewarding experience. Wim, I must confess that your ‘oracle’ view of science always surprised me, bringing up an unexpected, subtle twist of reasoning that discovered the originality behind each argument. Once, I found a piece of old Maastricht pottery with a drawing of a toad high up in the Andes (incredible how it got there!), remember? You said it was a symbolic sign of good omen: the metals used for glazing the ceramic were combined with the emergence of aquatic life. You were completely right. Michiel, you were the perfect sparring in the art of polishing each word and line. I enjoyed so much our day to day discussions to make the manuscripts ‘swing’ as a well balanced, unbeatable engine. Your enthusiasm and dedication was always motivating and perfectly complemented by your vast knowledge of the best beers in the world. As in the Elves and the Shoemaker tale, I found every now and then a bottle of a tasty beer on my desk early in the morning. ¡Salud, maestro! That was the start of a parallel PhD, which I continued on my own. I also want to thank Wim and Michiel, because I shared not only science and work with you, but good conversations and life stories, excursions and a valuable time with your families, who received me with warmth. I really appreciate that; you made me feel always at home.

I would especially like to thank my committee members, Karsten Kalbitz, Steph Menken, Leo Posthumo, Paul van den Brink, Nico van Straalen and Piet Verdonschot for...
Acknowledgements

accepting the task of reading my thesis manuscript and for the helpful and constructive comments. I am honoured to have you in my committee.

I am very thankful to my co-authors, collaborators and students, who took active part in the field, in the laboratory and with data analysis and writing. My gratitude goes to Julio for his permanent logistic support in the Cordillera Blanca and for the brainstorming on new projects, to Jorge who always showed a genuine interest in collaborating and combining social and natural sciences (which came true in a recent project), to Joost for his patience and good mood for showing me the magic of multivariate analysis, to Hans and Peter for their support and advice with genetics, to Rudo for the metal analysis, and to my students, Jenny, Camille, Milo, Maarten, Michel, Alex, Carlos and Rolando, all of you hard workers, always willing to help no matter the polluted and extremely cold waters in the Andes. Good luck with your plans and studies! Maxine, although we didn’t work together, we always shared a good time and a taste for cooking. I enjoyed it a lot!

My AEE colleagues, you are my Dutch family. Although it is difficult to resume four years of friendship in a few lines, I can say with certainty that you made my life happy, and each period in Amsterdam the best experience ever! The first day I arrived to AEE I met the most talkative guy ever: Ellard. Surprising, but we had long silent conversations during these years. No words needed, gestures were enough. Thanks for introducing me to Girly and your lovely kids; I enjoyed so much the birthday parties at Zandaam. Marino, my dear stari, every occasion was perfect to practice an unsurpassable black humor. You are right, SETAC conferences at Milan and Berlin were extraordinary, but Seville was memorable, especially because you could speak perfect Spanish with the locals: “Por favor, Plaza Nueva, gracias”. I’ll never forget how we got the wood pieces for refurbishing your apartment, the round trip in Rotterdam with Marie, and Efeling with your family. Ceren, you are the perfect partner for Marino, and, as we always say with Frans, he is lucky to have you. Natalia and I will always remember that romantic boat trip at night. We wish you a happy wedding too in the next future! Helen, you showed me how to find my way (on a bike) and made me feel confident in Amsterdam, especially when I first arrived to Diemen and years after while crossing a Bridge over troubled water. But perhaps one of the best ways you made me feel like home was sharing a couple of beers every Friday at the Brouwerij ’t IJ and Dorst. It was a common place for many AEE’ers and other friendly parishioners, who are now part of my fond memories of Amsterdam. We still have to write our project proposal, don’t forget that… Bram, we had so good time in Haarlem and I discovered that it was possible to survive in the Netherlands without cheese, coffee and beers, just with sweets, tea and Safari. The statistics course at Wageningen was great, especially with Mr. Wasaporn. Hope you and Marieke all the best, and a soon successful defence (you are the next in the row?). Merrin and Ale, we met almost at the same time and shared unforgettable moments during these years. The World Cup in 2010, bargaining on
Queen’s Days, the drinks at East of Eden and many parties with Nigel and Enzo, spiced with Argentinian Fernet and empanadas were impossible to beat! I am forever indebted to you for accepting being my paranymphs, and for helping me with the thesis printing and arrangements for the defence ceremony. You are the best! You are also close to finish your thesis. I wish you lots of success and a promising future. And of course, Nigel, thanks a lot for your help with the cover art. Sascha and Susanita, I’ll miss a lot our refreshing walks around the university, the coffee breaks, and the spontaneous jokes that relaxed the atmosphere in the office. How to forget SETAC conferences, but especially the parties? We still have to repeat that in Amsterdam, remember? Sascha, I wish you and Jeroen lots of success in Australia (with a new Volvo Amazon), and to Susanita and Tibert, an everlasting happiness with your new family. Harm, you saved me from isolation when I discovered the first time that I couldn’t use my laptop because sockets in the Netherlands were round, not flat! You made in a few minutes an adaptor with spare plugs and cables. A unique piece of Dutch engineering, which I still keep. ¡Gracias, señor! Bas, ¡hombre!, the story of your wedding rings keeps moving me. Thanks for your sincere smile and big heart; they cheered me up all the time. Tomás, Kapitán, walking kilometers under the blistering sun of Prague, eating ‘exquisite’ duck and dumplings with Krušovice, and partying with DJ Mucho at the Cross Club till next day was a liberating experience. Miriam, thank you so much for the wonderful paella at your parents place in Barcelona and for introducing me and Marino to your brother Pablo. We had so good time with him after Seville! Thanks for your tips and outspoken view of the PhD, they were very useful. Coen, Paquito, the practicum with the students and the trip to Ardennes were so fun, as much as the traditional BBQs in the park for your birthday. Hope you and Feliza all the best, and good luck with teaching and the MSc. Other AEE members and friends to whom I’m grateful are Jaap (please keep your Porsche and Alfa Romeo), Britt and Juliene (thank you for the good music, buddies!), Jasper (having you an Marielle in Lima after your incredible adventure in Cusco, was great!), Ciska, Vesna and Arie. David and Maarten, you were always so nice to me, making each moment fun, full of jokes and stories around the world, amazing conversations about history and a never ending collection of the best music ever! To my roommates at IJburg, van Anh, Yukie and Xavi, for sharing with me their experiences and culture, and for the delicious spring rolls, sushis and Spanish tortillas. The best in Amsterdam!

I also want to express my gratefulness to Mary, Betty, Tanya, Maria, Mijke, Saskia and Frank, great staff at IBED’s secretariat and management direction, for your permanent help and positive energy. During this time I also met extraordinary people, like Antoine Cleef and Jan Sevink, who always shared with me their vast knowledge and experiences on the Peruvian and South American Andes. Hope we could meet in Peru one day!
Acknowledgements

All of you who I mentioned above are inseparable part of my life, because you were always present, but above all and most importantly, during distress and difficult moments. I have no words to thank you for that.

Quiero iniciar estas líneas agradeciendo al Perú, por darme la oportunidad de hacer esta tesis, y de descubrirlo y quererlo cada día más. Estoy convencido de que la única forma en que este gigante maravilloso logrará sus sueños es con la creación de conocimiento científico y tecnología que permita a los peruanos vivir con más dignidad. Como compuso Chabuca Granda, “es un derroche de amor el suelo mío/y es que es el hijo del sol/el Perú mío/es un gigante al que arrullan sus anhelos/bello durmiente que sueña frente al cielo”.

Mi especial agradecimiento va al invalorable apoyo del Programa de becas Keizo Obuchi de la UNESCO y del Programa de Ciencia y Tecnología del Perú (FINCyT) por habermee concedido las becas que me permitieron realizar este doctorado en la Universidad de Ámsterdam, en los Países Bajos. De manera especial, quiero agradecer a Leila Zas-Fris, de UNESCO, por su permanente apoyo e interés en mi proyecto, y por su hospitalidad en París durante la ceremonia de entrega de las becas. Asimismo, a la Universidad Peruana Cayetano Heredia, mi casa de estudios, y a la Facultad de Ciencias y Filosofía, que me apoyaron tanto en forma económica como administrativa, para hacer posible mis estadías intermitentes entre Lima y Ámsterdam. Gracias a la Dirección Universitaria de Relaciones Internacionales por facilitar la visita y estadía de estudiantes holandeses en la UPCH, al Directorio de los Laboratorios de Investigación y Desarrollo por permitirme crecer en mi área de investigación, a todos mis amigos y colegas del Departamento de Ciencias Biológicas por su apoyo y buenas vibras, y a mis alumnos en el Laboratorio de Ecotoxicología que tomaron las riendas con responsabilidad y eficiencia durante mi ausencia.

Cuando inicié esta aventura a inicios del 2002, trabajaba en el Laboratorio de Biología Molecular de Tripanosomátidos, en el Instituto de Medicina Tropical ‘Alexander von Humboldt’ de la UPCH. A pesar de tener todas las posibilidades para realizar un doctorado, quería explorar algo diferente, por mí mismo, que me llevara a conocer y sentir el Perú más de cerca. Mi querido amigo y jefe en ese entonces, Jorge Arévalo, me ofreció más de una vez un beca, pero rehusé. A decir verdad, me sentía incómodo de rechazar tan extraordinaria propuesta, pero sabía que debía ser consecuente con el sueño que rondaba en mi cabeza. Jorge, gracias por tu aliento e invalorables consejos, por las inspiradoras charlas con un café, y por tu enorme generosidad.

Patricia y Pepe, a ustedes mi infinito agradecimiento, porque me pusieron en contacto con Frans, sin saber que se convertiría en uno de mis amigos más entrañables, de esos que uno siente haber conocido y querido toda la vida. Frans, hermano, las tardes de fin de semana en Ámsterdam fueron todas distintas, como una historia escrita con los mismos personajes, pero desde diferentes perspectivas. Una historia de hilos comunes que se
entretejían entre chispazos de genialidad, de sorpresa y de sarcasmo, que sazonaban cada conversación en una terraza al borde de un canal. “Habla para que yo te conozca”, decía Sócrates. Y así fue, el puente indestructible de las palabras hizo su trabajo mejor que nunca. No olvidemos los Cuentos de la Vieja Iglesia, serán un éxito rotundo.

Estoy seguro que mi viejo está muy orgulloso de mí. Siempre me lo hizo saber, y así lo siento ahora. No puedo explicar la sorpresa que aún me sacude por su ausencia. No es tristeza, es la sensación de saber que no se verá más a un amigo único y entrañable, al que quisiéra hacerle tantas preguntas. Pero bueno, aquí estamos y hay que darle pa’lante nomás. Gracias, viejo, por enseñarme a querer; es la mejor forma de abrir todas las puertas. Madre querida, tu hijo sobrevivió al frío y a la distancia, a un mundo diferente sin tus cuidados. Gracias a ti sé valorar lo que la vida me ha dado, y he aprendido a hacerme de un espíritu tenaz y persistente, aunque claro, no a la velocidad que te gustaría. Es que cada uno marcha a su propio ritmo, y eso es lo importante. A mi hermano y amigo Javier, a Dolly, que siempre me hablaba a su manera, y a toda la familia, mil gracias por mantenerse siempre en contacto.

Nati de mi alma, compañera inigualable. Es curioso cómo nunca se cruzaron nuestros caminos, a pesar de habernos conocido hace casi veinte años. Cosas raras del destino, pero llegaste a mi vida en el momento preciso, justo cuando pedía a gritos un ancla, y tenía una necesidad impostergable de amar. Tú me regalaste un corazón sencillo y noble, confiado y dulce al extremo, como nunca había conocido, que me acompañó, comprensivo, en los momentos más difíciles y de mayor presión. ¡Gracias eternas por decidir compartir tu vida conmigo!

Finalmente, quiero decir que me siento infinitamente afortunado por tener amigos extraordinarios que estuvieron siempre a mi lado, aquí y allá, y que hicieron mi vida más fácil y llevadera durante estos años: Daniel, Pancho, José Carlos, Carolo, Willy, Carmela, Mariella, Andrea, Felipe, Anamaria, Joe, María José, Óscar, Silvana, Fefe, Nacho, Robert, Marcia, Thomas y la pequeña Sienna, Christian, Simón, Teresa, Lacho, Chicho, Cesáreo, Marco, Hugo, Karla, Amanda, Johanna, Micky, los ilustres miembros del Grupo de Estudios, del Laboratorio C, de la Cofradía de los Osos Revoltosos, los colegas de la UPC, y muchos más. Los quiero mucho.