

PhD opportunity to study ecological solutions for a human parasitic disease in Sub-Saharan Africa  
\*Please send CV, cover letter and 2 reference letters by October 20th to Susanne Sokolow at shsokolow@gmail.com.

University of California, Santa Barbara

Schistosomiasis is a debilitating parasitic infection affecting more than 220 million people in the developing world, especially where dams and water projects have greatly expanded freshwater habitat

for snails, the parasite's intermediate hosts. Traditional interventions for the control and eradication of this disease have relied on repeated drug treatments, which invariably end up in reinfection, as parasite reservoirs remain undisturbed in the aquatic environment. Controlling snail populations offers a logical means towards eliminating the disease, but few environmentally-safe and effective snail control options exist.

An international Research Group, with 3 of 5 PI's based at University of California Santa Barbara, have funds to conduct an investigation into the viability and cost-effectiveness of a novel biological control approach based on the reintroduction of native crustacean predators (prawns) of snails in small aquaculture facilities. Results of preliminary field studies, laboratory experiments and modeling projections show how this method might offer a win-win solution by a) amplifying the positive effect of traditional drug treatments, b) possibly eradicating the disease from some areas, and c) offering a source of protein and marketable goods for the local populations.

The PhD student's project will be highly interdisciplinary, at the interface between ecology, economics and public health, but will primarily focus on interview-based social science research to ask: (1) can environmental re-introduction of native prawns using aquaculture offer sustainable control of schistosomiasis? (2) what are social-ecological feedbacks in this system? and (3) what are the relevant circumstances (or barriers) under which entrepreneurs are likely to adopt (or not) prawn aquaculture for disease control?

The outcomes of the project are likely to lead to improved public health strategies for control and elimination of schistosomiasis in Sub-Saharan Africa, and advances in the fields of ecology, epidemiology, economics, aquaculture science, and parasite modeling. The PhD graduate will achieve competencies at the interface of social and natural sciences.

The selected applicant would need to apply for or be matriculated in a PhD degree program at UCSB (US residents and citizens only).

Ideal PhD candidates will have:

1. Study and/or research experience in a relevant discipline such as geography, social science, biology, ecology, epidemiology, or public health
2. Experience with interview-based research techniques (a plus) or dedication to completing a PhD using human subjects interview-based research techniques (a requirement)
3. Interest in ecological solutions for improving human public health
4. Experience working internationally, in West Africa, or in third world countries (a plus)
5. Fluency in the French language (a plus) or basic proficiency in French (a requirement)
6. A demonstrated publication record in scientific journals (a plus)
7. Demonstrated interpersonal and communication skills (required).

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