Supplemental Materials (1) to Worrell *et al.* Field Detection of *Schistosoma japonicum* Cercariae in Environmental Water Samples by Quantitative PCR.

The sampling methods evaluated in this manuscript were designed to exploit the biologic characteristics of *S. japonicum* cercariae, such as phototaxic and surface-seeking behavior. Therefore to maximize the capture of any cercariae present in surface water, both techniques sequestered samples from the surface of the water column. During the design process, additional logistic considerations such as expense, versatility, compactness and durability were taken into account in developing prospective techniques for field application following other methods designed for application in resource-limited settings. A comparison of these developmental characteristics of the direct and siphon sampling apparatuses with the mouse bioassay is presented in Table S1.

Direct sampler construction. The direct sampler was created from locally sourced materials by fashioning and lashing a 30 cm x 26 cm length of wire mesh (1 cm mesh size) into a flattened ellipse-shaped sampling cage. The flattened anterior aspect acted as a sieve for macroscopic debris, while the sloping posterior aspect served as a mounting platform for the sampling filter. For each sampling site one single-use, 300-count nylon filter material (10 cm x 30 cm) was fastened to the inner wall of the posterior segment of the sampler using fastening clips. After the filter was secured, external plastic floats were attached to the sampling cage for buoyancy and to ensure consistent sampling depth across sites (Photo S1).

Photo S1: Direct sampler *in situ*. The direct sampler (A) is deployed in the site of interest in parallel with the mouse bioassay cage (B) seen here with a sun cover.

Siphon sampler construction. The siphon sampler was constructed using a locally-sourced gravel cleaner with 2 meters of tubing, a ball valve (Warmtone, WT-228) and a 16 L rectangular plastic container (45 cm x 30

cm x 15 cm). In order to filter macroscopic debris and provide structure to the siphon head, a supporting wire mesh cage (23cm x 13cm x 11.5 cm) was constructed. The proximal end of the siphon spout was secured to the superior aspect of the cage using a bracket and the tubing at the distal end of the spout was secured to the base of the cage using a hose clamp allowing the sampling of the top 1 cm of the water column while maintaining the siphoning action. Floats were attached externally to the cage for buoyancy and to ensure consistent sampling depth across sites (Photo S2).

Photo S2: Siphon sampler. Posterior view of siphon sampler including external floats and siphon tubing.

A 16 L plastic collection container was modified by boring a hole approximately 5 cm above the base of the short edge of the container, large enough to accommodate a periscoping outlet hose. The periscoping hose was constructed such that water was drained from the center of the water column — but only after the water-level had reached the container's capacity — in order to achieve efficient concentration of cercariae, which are surface-seeking when alive and rapidly descend when dead.

Table S1: Comparison of sampling schemes based on developmental characteristics

Type	*Inexpensive*	*Sensitive*	*Versatile*	*Compact*	*Durable*
Direct	+ + +	+ + +	+ + +	+ + +	+ + +
Siphon	+ + +	+ + +	+	+ +	+ + +
Bioassay	+	+ +	+ +	+	+