

# Small mammals from the Lake Victoria Basin, Kenya: new species, familiar species, and implications for schistosomiasis control.

[Hanelt B](#), [Mwangi IN](#), [Kinuthia JM](#), [Maina GM](#), [Agola LE](#), [Mutuku MW](#), [Steinauer ML](#),  
[Agwanda BR](#), [Kigo L](#), [Mungai BN](#), [Loker ES](#), [Mkoji GM](#).

## Abstract

Recent schistosomiasis control efforts in sub-Saharan Africa have focused nearly exclusively on treatment of humans with praziquantel. However, the extent to which wild mammals act as reservoirs for *Schistosoma mansoni* and therefore as sources of renewed transmission following control efforts is poorly understood. With the objective to study the role of small mammals as reservoir hosts, 480 animals belonging to 9 rodent and 1 insectivore species were examined for infection with schistosomes in Kisumu, in the Lake Victoria Basin, Kenya. Animals were collected from 2 sites: near the lakeshore and from Nyabera Marsh draining into the lake. A total of 6.0% of the animals captured, including 5 murid rodent species and 1 species of shrew (*Crocidura olivieri*) were infected with schistosomes. Four schistosome species were recovered and identified using *cox1* DNA barcoding: *S. mansoni*, *S. bovis*, *S. rodhaini* and *S. kisumuensis*, the latter of which was recently described from Nyabera Marsh. *Schistosoma mansoni* and *S. rodhaini* were found infecting the same host individual (*Lophuromys flavopunctatus*), suggesting that this host species could be responsible for the production of hybrid schistosomes found in the area. Although the prevalence of *S. mansoni* infection in these reservoir populations was low (1.5%), given their potentially vast population size, their impact on transmission needs further study. Reservoir hosts could perpetuate snail infections and favour renewed transmission to humans once control programmes have ceased