

Monitor lizards were sampled along the shores of Lake Victoria to detect natural infections of potentially human-infective trypanosomes. In an area with endemic rhodesian sleeping sickness, one of 19 lizards was infected (Busia, Kenya). Six of ten lizards also showed indirect evidence of infection with *Trypanosoma brucei* (antibody ELISA). In an area with no recent history of human disease (Rusinga Island), no parasites were found and no antibodies to *T. brucei* were detected. The isolate was identified as *T. brucei* through xenodiagnosis (completion of the life cycle in the salivary glands of tsetse), and through molecular techniques (positive reactions with a PCR primer and a microsatellite DNA probe characteristic of the subgenus *Trypanozoon*). Experimental infections of monitor lizards were also attempted with a variety of parasites and tsetse species. It was possible to infect monitor lizards with *T. brucei* but not with forest or savannah genotypes of *Trypanosoma congolense*. Parasites reached low levels of parasitaemia for a short period without generating any pathology; they also remained infective to tsetse and laboratory rats. The implications of these findings are discussed in relation to the endemicity of sleeping sickness.