Project Update: October 2003

I have found that the African clawless otter's dependency on the Louisiana crayfish (Procambarus clarkii) as a food source has made it susceptible to environmental factors affecting its prey base. This is exacerbated by the effect of the Louisiana crayfish on other prey species like the freshwater crab (Potamonautes neumannii). This has been a negative human impact on the clawless otter. The crab is a more stable food source for otters because they voluntarily crawl out of the water onto rocks and back, so their exposure to predators do not vary with seasons. The dry seasons are characterized by lower percentages of crayfish in otter faeces. Otter faeces collected during the dry seasons had higher percentages of bony fish remains. This was a sign of food stress, because the otters' vestigial claws made it very difficult for them to catch fish. Aggregation of faeces was diminished during the dry seasons and the territorial reactions to 'alien' spraints placed within known otter territories were not observed.

During the dry season surveys, we found crayfish remains in the faeces of monitor lizards (Varanus niloticus), genets (Genetta genetta), and olive baboons (Papio anubis). Crayfish remains were also recovered beneath known roosts of goliath herons (Ardea goliath). Close examination of the foraging techniques used by the above species reveals that all of them are 'dippers' (as opposed to divers). This means that they would not be able to catch crayfish (which are bottom feeders) at a depth of less than 50 cm in turbid water.

The study therefore concluded that there is increased competition for crayfish during the dry season from species that would not otherwise be able to access crayfish. The otters are therefore forced to forage over larger stretches of river in order to fulfil their nutritional needs, and cannot afford to defend territories. During the dry season, the man-made water reservoirs provide refuges for crayfish. Even though these reservoirs are positive human impacts in this context, they are only mitigating a far greater negative impact, which is the introduction of crayfish into this ecosystem.