REPTILE RESOURCES IN ALIFUUTO RESERVE

The important reptiles in Alifuuto Reserve are the following:

1. Nile Crocodile (Crocodylus niloticus)
2. Nile monitor Lizard (Varanus niloticus)
3. African Savana monitor (Varanus exanthematicus)
4. Leopard tortoise (Geochelone pardalis)
5. Marsh terrapin (Pelomedusa subrufa)
6. Softshelled river turtle (Trionyx triunguis)
7. African Rock Python (Python sebae)
8. Chameleo genus (Perhaps several species)

1 CROCODILES

Of the above reptile resources, the most important in Alifuuto Reserve is the nile crocodile (Crocodylus niloticus). The Shabbelle river with its associated waterbodies such as Maffunge, Far Marzan, Lake Teerad and the swamp between Alifuuto to Balballe, the reserve forms the most important National Crocodile Reserve. In terms of habitat, the reserve provides riverine, swamp and oxbow lake to the Nile Crocodile. The two man-made reservoirs formed by damming of the river at Shabllale and Hawaq provides a slightly altered sub-perrineal habitat for the nile crocodile.

The following aquatic areas are important Crocodile habitat within the boundaries of Alifuuto Reserve.

Habitat	Rating	Area (Approx)
1. Lake Teerad and associated swamps	A+++	5-10 sq km²
2. Hawaq reservoir and associated Wabi Maffunge	A++	30-35 sq km
3. Sabllale reservoir & Far Marzan	A+	20-25 km
4 Alifuuto Swamp and river stretch upstream up to 20km of Arbousherraw	A	20-25 sq km

1.2. Hawaay reservoir waterspread and Wabi Hafunge.

The waterspread of Hawaay reservoir and Wabi Hafunge that joins Shabelle near Balad'rame village north-west(?) of Hawaay reservoir forms another perennial aquatic habitat for nile crocodile. This stretch perhaps holds ~~the next largest~~ about 50-70 adult crocodiles with a mixture of riverine, lake and swamp habitat. The whole area is of considerable scenic value and being near to Hawaay, Shabelle could well be developed as the tourist sector with a well-planned interpretation programme. Nature Crocodile-egg harvesting could also be envisaged from this sector. At the present time development of farmlands along the Wabi-Hafunge and camel-watering point appears to be most disturbing. Unless this is looked into, this may cause considerable problems for management - both in terms of increasing crocodile-livestock conflict situation as well as loss of many crocodile nesting and basking areas. A potentially very ~~tourism~~, educational, recreational zone within the reserve will be lost for ever. Crocodiles, Hippopotamus, Pelicans, storks, fishing eagles, warthogs and other ungulates are some of the animals that could be easily shown to visitors here. A combined patrolling cum-educational river sector could be developed here with Hawaay as the base. A small 12-16' speed Aluminium boat with outboard motor will be ideal for this.

1.3. Shabelle - far Herzan upto Haanor village.

The Shabelle barrage waterspread & ~~and~~ with the far-Herzan water ~~inflow~~ inflow forms another important crocodile area. Some of the very large sized crocodiles foreseen here. This area is also rich with other wildlife such as water-buffalo, Hippopotamus, waterbuck, Indian Serval cat and marsh terrapin (turtles). The estimated crocodiles in this area is around 50-60 adult crocodiles.

The ~~(Shabelle)~~ banks of the river ~~in this~~ stretch is ~~more~~ populated with a high incidence of man-crocodile (livestock-crocodile

1.1. Lake Teeroad:

Undoubtedly, the best crocodile population of nile crocodile in the reserve is in the Lake Teeroad and its associated swamps. Based on the Aug 1990 survey, the population could be over 70-100 adult. Though no juveniles or hatchlings could be seen during the period of Aug 90 survey, there is reason to believe that the associated swamps provide ideal habitat for hatchlings and yearlings for dispersal. This population of nile crocodiles should be managed totally undisturbed - free from harvesting of eggs or sub-adult, adults. Lake Teeroad also has the highest density of fish, Hippopotamus for any waterbody within the reserve. This rich diversity and density of different aquatic fauna ~~even~~ in association with crocodile could be utilized to educate the fisheries interest that Crocodiles are not damaging to fish resource.

Conflict situation. This area is also the only place where considerable quantum of set-net fishing takes place. Will several families of fishermen from Sabllale are operating in the river and reservoir waters spread from Diramé village.

This area needs more patrolling and public-relation exercises than any other area. There may be a need to shift some of the riverside villages both for their own benefit as also that of the reserve.

A river-patrol boat with base at Sabllale will be ideal. The river patrols suggested for Hawray-Mafunge and Sabllale-Far Marzan-Hasnor sector will also be the easiest and quickest way to reach different parts of the reserve. The river could act as the Central ~~highway~~ waterway for the Reserve management. Beside ~~mobile~~ patrolling the use of such boats will restrict unproductive use of expensive and limited fuel which one would tend to used in a ~~road~~ roundabout transport.

1-4. Alifunto Swamp and Shabbelle

The non-navigable swamp section from Alifunto to Balballe according to riverside villagers have no large crocodiles. Since the swamp does not have basking or nesting sites, this sounds quite logical. However, the swamp may possibly serve as a dispersal ~~area~~ and ~~rearing~~ ~~area~~ year round habitat for hatchlings that float down from upstream. The ~~floating~~ ~~and~~ submerged, ~~and~~ ~~emerging~~ ~~vegetation~~ and reed vegetation in the swamp buffers the swiftness of the waterflow and hatchlings and yearlings could easily bask on floating mass of vegetation. Sighting of small hatchlings down river of Alifunto swamp and yearlings downriver of is the basis of such assumptions.

In terms of open exposed ~~nesting~~ nesting and basking habitat, the river stretch 20-25 km upstream from Alifunto village - though remains outside the reserve area appears to be very important. During the Aug 1990 survey, a good

representation of all size class of crocodiles was observed in this stretch, with a high percentage of hatchling class. This stretch may therefore needs to be protected and monitored by the Alifuuto Reserve. From crocodile point of view this stretch is well within the ecological boundary.

3. Suggested Crocodile Survey & monitoring Plan in Alifuuto Reserve

ANNUAL CALENDER OF

SECTORS	~~ANNUAL~~ MONTH SURVEY IS TO BE CARRIED OUT			
	FEBRUARY NESTING SEASON	MAY HATCHING SEASON	AUG POST-MONSOON SEASON	NOVEMBER ANNUAL POPL. SURVEY
LAKE JEERAD	–	X	–	X
HANAY-MAFFUNKE	X	X	–	X
SABLLALE-FARMARAN	X	X	X	X
ALIFUUTO – UPSTREAM 20KM OF RIVER	X	X	X	X

The above schedule of crocodile survey & monitoring is suggested. All the four sectors will need not more than 10 days to be surveyed during each season. The February nesting survey is important for areas from where wild-laid crocodile eggs are to be harvested. The annual population survey is recommended to be in November. But depending on the water-flow level in the river this survey could be carried out in August. Since, Sabllale-Far-Marzan sector is more disturbed and needs constant patrolling and public relation a quarterly monitoring is suggested to intensify presence and patrolling and to monitor the result of such action on crocodile population and man-crocodile conflict situation.

It is suggested that beside the Alifuuto Reserve management staff the national crocodile project officials be involved in this survey as except Lake Jeerad other three areas could provide the National Project with wild-laid

Crocodile eggs.

A master survey register be maintained and all survey raw data be recorded for long-term analysis. This should begin with the 1990 August- survey records.

2- Crocodile Protection Plan

It is suggested that the Alitundo Reserve use river patrolling as the best method of crocodile protection. Regular patrolling, beside giving protection can also serve as population trend monitoring. Such river-patrolling will also help identify intensive-crocodile habitat utilization areas, man-crocodile conflict areas, nesting areas etc. Additional benefits for such survey will also be in recording other wildlife using the river and other water bodies during water-scarcity seasons. Such informations are always helpful to the reserve management to gear up protection plan, developing compensatory water resource away from river etc.

The Alitundo reserve management may also consider identifying informers in nearby fishing villages and market-places around the reserve to collect information on illegal crocodile hunt- etc.

There are evidences that in stretches of river between Hassnar to Sabilale barrage use of set-net across the river is on the increase. This will be detrimental to small crocodiles. A check on this and review of on fishing rights within the reserve is called for.

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4. TURTLE RESOURCE:

The Alifuutu swamp from alifuutu to Balbale provides ideal habitat for the river terrapin. During the course of 1990 Shebbele crocodile survey ~~we have come across~~ were observed several river terrapins as well as soft-shelled river turtle in the waterspread of Sabllale and Haway barrage. Shells of dead terrapins were also observed on the banks of Lake Jeerad. It is not certain wether the fishermen at Dirame/Sabllale Yarre use river turtles as food or just kill them if they are caught in the set-net. Both the soft-shelled turtle and the river terrapin are in the CITES APPENDIX II and needs to be monitored and their status in the reserve determined.
The status of Leopard tortoise is to be determined in the reserve.

5. MONITOR LIZARD & CHAMELEONS

The density of nile monitor is not as high with-in the Alifuutu resrve as it is elsewhere. This may be due to the fact that the river does not have much exposed sandy banks and is rather swampy. Whereever there have been sandy banks remain submerged most of the time due to retention of water in the Sabllale and Haway barrage. The best nile monitor area in the reserve is along the river between Balballe and Dirame.

The African savana monitor is much rarer a species ~~than the nile monitor~~. In the course of our survey only one savana monitor was observed (a dead one) near Sabllale Yarre village.Perhaps in the transition belt of the sand dunes and the thorn-bush savana vegetation on the eastern boundary of the reserve this monitor has ~~his~~ its stronghold. A survey is necessary ~~for~~ to determine the

~~THE CROCODILE RESOURCE~~
status of this rare moniter in the reserve.

~~Somalia~~ Somalia has the distinction of being the home of six species of chameleon. During the 1990 Crocodile survey no chameleons were observed. But, this ~~could~~ may be the result of our restricted movement ~~along~~ on the river. A collection of samples be made for identification of occurence of different species of chameleons.

6. Snakes:

Except for one water-snake, and few being eaten by eagles no other snake has

Any crocodile survey.
been observed during 1990. A collection of all dead
snake found in the reserve be made as a routine to
make checklist of snakes. The African fish eagle and the
crested serpent Eagle have been observed to feed on
many species of snakes. Many the water course, ~~be~~ carcass
or dropped dead snakes are ~~found~~ invariably found. Such
bits and pieces could also help identify the species
of snake found in the reserve. Such collection of
any dead mammals, birds, reptiles and storing them in
a make-shift ~~museum~~ museum will help managers to
quickly compile list of fauna for the reserve. Perhaps
a small token reward for such field collection for
a limited period may help. However, care should be
taken that such reward does not initiate a hunt
for specimen.

Depending on availability of resource both financial
and manpower, I suggest a full-scale herpetological survey for
the reserve will not be out of place.