

TS

NOTES ON THE PROBLEM OF PRIMATE
CONSERVATION IN BIA NATIONAL PARK

BY
MICHEAL RUCKS.

MAY * 1976

DEPARTMENT OF GAME WILDLIFE
BIA NATIONAL PARK
COLOBUS CAMP
BOX 171
SEFWI-WIAWSO

NOTES ON THE PROBLEM OF PRIMATE CONSERVATION IN
BIA NATIONAL PARK

INTRODUCTION

Now that the forest of Bia National Park is guaranteed to remain untouched, the only problem confronting the primates are those associated with illegal hunting. Natural predation in such a balanced ecosystem as the Park is no threat to the primate populations. In one year of observations on one group of Red Colobus, only 4 Crowned Hawk-Eagle attacks were observed and all of these were successful. Death from natural causes for the year was one infant which was abandoned by the mother after she fell and broke her leg and was physically unable to carry the infant.

The following are notes on the various species discussing the problems each species faces under hunting pressure.

RED COLOBUS: Colobus badius badius

Red Colobus proved to be the most susceptible to hunting pressure and have proven to be the first species which becomes extinct in local areas where hunting is common. The two months work done by Mr. E.K. Armah in Sukusuku have shown Red Colobus to be absent. My work in 1972 - 1974 showed Red Colobus to be absent in Krokosua Hills Forest Reserve whereas the other monkeys and chimps were present.

Red Colobus are highly vocal animals and spend the majority of their time in the upper canopy. They can be heard vocalizing for more than 400 yards. This greatly aids the poachers in locating them. When disturbed, they make a great deal of noise and run away single file from tree to tree. They do not disperse. The poacher can even predict where the troop is moving and can move ahead and shoot them one by one as they pass before him and he will have a very clear shot and good visibility since they usually move at about 120 feet.

...../2.

Early in the study, before the troop became habituated, they would try to run away from us and we had no problem following them. eventually they would stop and after about 30 minutes would resume their normal activities. So if the poacher is patient, he can shoot and follow and shoot and follow and can kill every monkey in the troop in one day.

DIANA MONKEY: Cercopithecus diana

Diana monkeys are the second most susceptible to hunting pressure. They appear in reduced numbers where Red Colobus are absent and have been found to be absent along with the Red Colobus in areas where Black and White and Olive Colobus were present along with the other monkeys.

Diana monkeys were found to be the most numerous of the primates in the undisturbed forest of Bia National Park during the 1972-1974 survey. They were found in large groups and the groups were encountered frequently. (as for which primates are the most numerous, you should check with Diana about the Black and White. From her recent work and mine, it seems that the Black and White may be quite numerous if not more so than the Dianans)

The Diana spend much of their time in the upper canopy although they are often in the middle and lower. As far as providing a good target, they are second only to the Red Colobus. They are far more clever than the Red Colobus in escaping as they disperse and can be lost altogether. However, they are easy to detect from a distance due to their vocalizations and a great many can be shot before they effectively disperse since the troop size can be in excess of 40 monkeys.

BLACK AND WHITE COLOBUS: Colobus Polykomos

Black and White Colobus also spend much of their time in the upper canopy. They have very loud vocals which they make early each morning. This characteristic "rrrrrrrrring" vocal can be heard from more than 400 yards. They live in smaller sized groups than the Red Colobus and Diana.

These monkeys have a real ability to survive in heavily hunted and populated areas. One group was able to survive only $\frac{1}{2}$ mile from Asempanye until last year.

After their early morning calls, the Black and Whites are virtually silent the remainder of the day. They occasionally will make the "rrrrrrring" vocal during the day when disturbed or aroused. However, they often remain motionless and silent when disturbed by humans as opposed to the Red Colobus and the Dianas. It is, therefore, possible to walk by or sit under a group of Black and White Colobus and never know it.

I feel this response to humans is why they do so well as opposed to the Red Colobus and Diana monkey. Even after the "rrrrrrring" vocal is heard, it is very difficult to trace the monkeys as they can be silent for many hours.

Spot Nose and Mons Monkeys: Cecopithecus petaurista and mona

These two species can survive in very populated and heavily hunted areas. They spend most of their time in the middle and lower canopies and sometimes even travel on the ground. (A note on canopies. Actually there is really only a broken upper canopy and a lower canopy in Bia with a broken mid-stream area. There are no clearly defined canopies. I would say upper canopy means 100 feet and up, middle canopy is 60 - 100 feet and lower canopy is ground to 60 feet)

Difficult visibility is their main insurance against hunters and when startled they can move silently into the thick understory. Many of these monkeys do get shot, but they seem to be the last ones to become locally extinct.

OLNE COLOBUS: Colobus versus

I really don't know much about these monkeys. They were often seen in groups with Diana, Spot-nose and mona monkeys. The multispecies groups travel together with the Dianas above and the others moving along under them.

The Olive Colobus were always seen at about 30'. However, I have seen them 120' as well as at 100 feet with the Red Colobus. This variability is the case, actually, with all species. It is not really possible to assign a monkey to an altitude with any sense of precision. The notion that the Red Colobus are above the Black and White Colobus is generally the case, but the exceptions are quite numerous and this is also the case with the Olive Colobus. I have also seen them without any other monkey species. It is obviously easier to detect them when they are with the other species as this draws the observers attention. I am not aware of an Olive Colobus vocalization and have never heard them make vocals when I knew them to be the only species in a group nor have I heard them when they were with other species. I think this makes it difficult to locate them unless they are with other monkeys. They can move with incredible speed and silence through the lower canopy.

I know of one Olive Colobus shot near Ajufua to the east of town which is a very populated farming area with a lot of hunting so it seems that their general quietness may make it possible for them to outlast the Red Colobus and Diana monkeys.

MANGABEYS AND CHIMPANZEES: Cercocebus torquatus and pan troglodytes

Hunting Mangabeys and Chimps in the Park would be very difficult since they travel on the ground and are very alert and are far too fast to follow. It seems that most of them are shot on farms outside the Park where their natural cover of the understory has been removed by the farms.

HOME RANGE:

The Red Colobus definitely have the biggest home range of the arboreal primates as it comprises roughly one square mile although all of the area is not equally occupied. They do, however, range over this much area during the year.

It seems the only primates who will be wandering in and out of the Park to any significant extent will be the Mangabeys and the Chimps and a buffer zone will be very important to these species.

We have found 3 groups of Red Colobus which border the first study group. On the North, West, and South so it seems that there will be some Red Colobus moving in and out of the Park although the Red Colobus all along the populated borders of the Park have long since vanished.

Chimp homsranges are around 8 - 10 square miles (this should be checked as I'm doing this from memory) and the Mangabeys are probably about the same. No one knows much about these forest Mangabeys.

DIET:

Only on the Red Colobus can I make a statement here. Based on the close Appendix, it can be seen that a large part of the Red Colobus diet is dependant on timber species. I must stress that frequency is not yet determined. The list is only of the trees used during each month and not what percent of the diet it represents. This information will be forthcoming when I get this project data onto a computer program. However, based on the list and from my own observations I think it quiet safe to say that the Red Colobus would suffer a great deal if the timber trees were removed from their area.

APPENDIX

Tree species in the diet of Red Colobus at Bia National Park for the period 1975-1976.

MAY 1975

<u>Pterygota macrocarpa</u>	Leaf and seeds	
Terminalia superba	seeds	
Entandrophragma utile	leaf and seeds	
Awlemborsamina (Albizia)	leaf	
Wawa (Triplochiton)	leaf	
Onyina (Ceiba)	leaf	
Okuro (Albizia)	Leaf	
Otie	leaf	
Onyinskonon (Bombax)	Leaf and ^f ruit	
Piptadinastrium (Dahoma)	leaf	
Entandrophragma cylindricum	fruit	.../6

Otanwra (Trichilia)	seed(Trichilia tessmamusi)
Potrodom	leaf
Scotellia coriacoa	fts
Khaya anthothesa	leaves
<u>June</u>	
Wawa	leaf
Kroma	leaf
Distamonenthia(B onsamdua)	sds
Utile	fruits
Sapele	fruits
Otie	leaf
Potrodom	leaf
Otanwru	leaf
Kyereye	lea f(Pterygota)
Uapaca guineensis	le af
Esa-kosua	lvs
Ofram	sds
Awlemfo-samina	lvs
Dahoma	lvs
Trichilia matimean	sds
Mansonia altissima	fw buds
kokoti	lvs
Nyeduaninni	lvs
Afena	lvs
Terminalia ivorensis	sds
Odum	lvs
<u>July</u>	
Afena	lf
Wawa	if
Otanwru	if
Kyereys	lf
Ofram	sds
Aprono	fw, sds
Bosamdua	lf/sd

Utile	lf/sd
Saopla	sd
Poytodom	lf
Okute	lf
Dahoma	fws/lf
KoKoti	lf
Kroma	lf
<u>Lova trichilodes</u>	lf
Trichilia martineau	sds also T. Megalantha sds
Otie	lf
Kotosima	lvs
Awiemfosamina	lvs
<u>AUGUST</u>	
<u>Trichilia megalantha</u>	sds
Wawa	lf
Kekoti	lf
Dahoma	fw/ft
Lova	lvs
Onyina	lvs /fw buds
Ofram	sds
Otanwru	sds
Aprono	sds
Akuro	lvs
Awiemfosamina	lvs
Kyereye	lvs
T. martineau	sds
Kotosima	lvs
Otie	lf
Khaya anthotheca	lvs
Funtunia	sds
Esa	lvs (no differentiation) between Esa-fufu and Esa-kokoo)
Wwabina	lvs
Esa kosua	lvs

Terminalia ivorensis	sds
Potodom	lvs
Kroma	lvs
Twensboa	lvs
<u>SEPTEMBER</u>	
Kyereye	lf
Werehima	lvs
Awiefosomina	lvs
T. mogalantha	fts
Onyinakoben	nlvs
Wawa	lf
Hanna Klainea na	lf
Aprono	fw/sd
Afena	lf/sd
Kroma	lf
Ofram	sd
Dahoma	lf/sd
Utile	lf
Onyina	lf
T. martineau	lvs
Okuro	lvs
Esa-Kosua	lvs
Khaya anthotheca	lvs
Temnalia ivorensis	lvs sd
Upaca	lvs
Funtumia	leaf ga lls
Otie	lf
<u>OCTOBER</u>	
Bediwoma (Canarium)	lf buds/lf
Afena	sds
KoKoti	lf

Odum	lf
Kroma	lf
Ofram	&S sds
Wawabima	sd/fwbd/lf
Lovoa	lf/fwbd
Aprono	sd
Funtumia	sds
Smiri	sds
Hyeduaminni	lvs
Onyina	lf/fwbd
Onyina	lf/lf bds
Utile	dry seed
Uapaca	lf
Scotellia	lf
Dah	lf
<u>NOVEMBER</u>	
Utile	dry seed
Ofram	sd
Wawabima	sd
T. martineau	lvs
Kyereya	dry sd/lfbds/lf/fw
Akasa	petioles
Onyina	lfbds/lf/sdbd
Afena	sd/lf
Utile	lf/dry/sds
Hyeduaninni	fw/sd/lv
Dahoma	lvs
KoKoti	lf
Kroma	lf
Otie	sd
Khaya	fw
Lovoa	lf
Onyinakoben	lf

DECEMBER

Dahoma	lvs
Kyereye	lvs
Ofram	sds
Utile	dry seeds
Yaya	sds
Wawa abima	lvs
Khaya	fw/lvs
Kroma	lvs
Onyina	fwbds
Kokoti	lvs
Aningeria robusta	lvs
Papao (<i>Azolla africana</i>)	lvs
Arimfosamina	sds
Otie	sds
Hyduaninni	sds
Lova	lvs
Afena	lvs
Uapauca	lvs
Esa	lvs
Okuro	lvs
Nesogordonia papverifera (<i>Alumadua</i>)	fw

JANUARY

Afena	lv/sd
Ofram	sd/fw/lfd
Hyduaninni	sd/lv
KoKoti	lv
Yaya	sd
Kroma	lv
Wama (not Wawa)	lv
Akata	lv
Esa-kosua	fw
Kyereye	lfd/lv/sd

T. martineau	lv
Kotosima	lv
Wawa	lfb
Dah	sd
Okuro	lf
Scotellia Klaineana	lv
Ataawa (Bissea)	lf
Otie	lf
Utile	lf
Onying	lf
Uapaca	lf
<u>FEBRUARY</u>	
Dahoma	sds
Ofram	lf/fw
Afena	lf/sd
Afena	lf/sd
Nonodora myristica	lf
Yaya	lf
Wawabima	sds
Utile	sd
Lova	sd
KoKoti	lf
H yeduaninni	lf/sd
Kyereye	lf/ft
T. martineau	fw
Okuro	lfb
Oryinakoben	sd
Esa -kosua	fw
H. exabolia cuspidatus	lf
Camrium schweinfurthii	lf/fw
Wawa	lf/fw
Kroma	lf
Ataawa	lf
Baphia pubescens	lf
Papao	fts
Wawapuo (cola gigantea)	lf
Funtmia	ft

MARCH

MARCH

Ofram	lf
Dhoma	lf
Otie	lf /sd
Kyereye	sd/lf
Okuro	lf/fw
Onyina	lf
Funtumia	lf
Kroma	lf
Ataawa	lf
Diospyros veridicans	lf
Wawa	lfbds
Akaasa	fw(chrysanophyllum albidum)
Odum	lf
Afena	lf
Tetrapleura tetraploides	lf
Esa-Kosua	sd
Wama	lf/sd
Kokoti	lf
Sapele	sd
Ivoa	lf
Baphia pukoescens	sds
T. martineau	ft

APRIL

T. magalantha	fwbd/lf
Kroma	lf
Dahoma	lf
Ivoa	lf
Wama	sd/lf
Esa	lf
T. marthina eu	sd

Emiri	lf
Otie	lf
Kokoti	lf
Oryinakoben	dryseed/lf
Kyereye	sd
Afena	sd
Funtunia	sd/fw
Ofram	sd
Essa-kosua	lf
Okuro	lf
Okoti	lf
Kroma	lf
Wawa lf	lf
Diospyros verimicans	fw/lf
Aningeria robusta	sd
Awienfosamina	lf
Aprono	New petioles
Uapaca	lf

Note: This is a fairly good list, but should not be taken as the last word as I have several unknowns still to be collected by the staff and identified. I also had to manually peruse over 1,000 pages of notes so I may have missed a thing or two. This should just give an idea of the variety in their diet.

I should also mention that at least 20% of their diet consists of vine leaves/fts and flowers. I made no identifications of the vines they ate.