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**R E P O R T O N  
H E A L T H  
A C T I V I T I E S I N T H E  
Y A N O M A M I A R E A**

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**DEMINI - TOOTOTOBÍ - BALAWAU**

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**DECEMBER 1993 - SEPTEMBER 1994**

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**PREPARED BY DOCTORS  
CLAUDIO ESTEVES DE OLIVEIRA  
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**CCPY  
Comissão pela Criação do Parque Yanomami**



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**We thank the other Health Professionals for their collaboration during the same period.**

**November, 1994**



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## INTRODUCTION

The following report refers to health care activities carried out in the Demini, Toototobi and Balawaú regions from December, 1993 to September, 1994.

The health project came up against operational problems caused by the precarious nature of the infrastructure in the field. These difficulties are inherent to the nature of the work controlling endemic diseases in the especially difficult conditions found in the Amazon forest. The teams working in the field were thus overtaxed.

At the same time, malaria was found to have been reintroduced into the Toototobi region through the renewed invasion of goldminers (garimpeiros) in adjacent areas. Its transmission has been favored by the increased population of mosquitoes.

In order to confront this serious health situation, as well as control the other principal diseases which threaten the Yanomami population of these regions, we have realized that it is necessary to greatly increase investment in human resources, logistical support and infrastructure in our project.

The additional investment, increasing our budget by 53% from US\$ 387,000 for the financial year of April, 1993 to March, 1994 to US\$ 593,000 for the year April, 1994 to March, 1995, as well as another US\$ 120,000 for improvements in infrastructure in the three health posts from which our health teams operate, was not made available until August of this year. At this point we were able to attain a sizable amount of the funding, if not the whole amount necessary, for the part of the project designed to improve infrastructure at the health posts, through an agreement signed with the National Health Foundation (FNS). This agreement, however, demands CCPY counter part funding of US\$ 300,000.

This agreement will ensure the major part of the funds necessary for the development of our work, and currently allows us to pursue a human resource policy more compatible with the demands of the work.

It should be emphasized that during financial year 1994 CCPY has been carrying out a thorough reorganization, both administrative and functional, as a result of our expansion over recent years. When completed, this will undoubtedly lead to improved performance throughout the organization.



## POPULATION DATA

The total population currently reached through CCPY's health project consists of 1,207 Yanomami, spread among 35 communities.

Of these, 624 receive permanent and regular care, based on the three health posts of the Demini, Toototobi and Balawaú regions.

The rest of the population (583 persons) seek out the health posts for treatment only intermittently, as they come from areas where there is no available health care.

The table below shows the population of the Demini, Toototobi and Balawaú regions receiving permanent health care, as well as the population of other regions that come to our health posts for occasional treatment.

## Target Population - Approximately 1.200 Yanomami

### 1 - PERMANENT CCPY HEALTH CARE

SUB-REGION	TOTAL POP.	COMMUNITY HOUSE	POP. PER C. H.	DISTANCE ON FOOT
BALAWAÚ POST	210	BALAWAÚ	13	7 hours
		HWAYASIKE	55	1 day in mountain
		KOREHEBI	37	3 hours
		RAHARABI	14	2 days
		ROBERTO	21	2 1/2 hours
		UXIXIMABIU	31	3 hours
		XAKIBI	19	half hour
		XOTOKOMABI	20	7 hours
DEMINI POST	92	WATORIK	92	half hour
TOOTOTOBİ POST	322	EDUARDO	16	5 hours
		FIALHO	48	3 hours
		HASHIMU	76	3 3/4 hours
		MAKOS	39	3 3/4 hours
		PAULINO	47	2 hours
		TOTÓ	97	1 1/4 hours
3 POSTS		15 MALOCAS (COMMUNITY HUTS)		

### 2 - SPORADIC HEALTH CARE VISITS TO OTHER MALOCAS

REGION	TOTAL POP.	MALOCA (COMMUNITY HUT)	POP. PER C. H.	DISTANCE ON FOOT / PIN
TARAÚ	22	WEYUKUTHERI	22 (IC)	BW P. - 3 days
AJURICABA (FUNAI/AM)	64	ITON	64	DM P. - 3 days
ARACÁ (MNTB)	96	KEBROBE	96	DM P. - 4 days
NOVA DEMINI (MNTB)	120	ANTONIO	60 (IC)	TT P. - 9 hours
		CANTUÁRIO	60	TT P. - 9 hours
VENEZUELA	281	MAXABABITHERI	59 (IC)	BW P. - 8 days (?)
		XIHOMETHERI	70 (IC)	BW P. - 8 days (?)
		MANAKARIUTHERI	36 (IC)	Various days
		ORINOKUTHERI	25 (IC)	
		MAAMAROHAOBRAOBE	20 (IC)	
		YEHYOBITHERI	12 (IC)	
		MAAMABITHERI	12 (IC)	
		TOMOKOXOBITHERI	12 (IC)	
		HUXIMATHERI	11 (IC)	
		RIAWEKITHERI	8 (IC)	
		DEXAMUITHERI	7 (IC)	
		HABAKAKITHERI	4 (IC)	
		SIMOKOTHERI	2 (IC)	
		HYOMOSITHERI	3 (IC)	
5 REGIONS	583	19 COMMUNITY HUTS		

IC = Incomplete census. BW P. = Balawaú Post. DM P. = Demini Post. TT P. = Toototobi Post

Note: No complete up to date census exists for the Taraú and Venezuelan populations that receive occasional care from CCPY.

## HEALTH INFORMATION

### 1 - MALARIA

Cases of malaria throughout the whole Yanomami area currently on the increase as a direct result of illegal invasions of garimpeiros. Contributing to the seriousness of the outbreak is the fact that during this period, with the lessening of the rains after August, the population of anopheles mosquitoes, transmitter of the disease, increases substantially.

As of December, 1993, there has also been an intense influx of garimpeiros on the Venezuelan side of the Yanomami territory, principally along the tributaries of the River Orinoco near the Toototobi region. This has created conditions propitious to the reintroduction of the disease in this area.

After the massacre of the Hashimutheri in June, 1993, the community's survivors fled to the Toototobi and decided to stay, living next to Makos' maloca (community), their old allies. They have built a new house and planted crops. However, until these bear fruit the Hashimutheri have undertaken various trips to Venezuela in search of food and also to carry out funeral rites in friendly communities, returning each time with a high incidence of malaria. We also noticed that on these trips some Yanomami have visited the garimpeiros receiving presents, such as shirts, shorts and other gifts to their liking.

Repeatedly warned of the connection between the garimpeiros and the risk of infection, not only by the health teams but also by community neighbors and Toototobi residents, as well as by Yanomami leader Davi Kopenawa during a recent trip to the Toototobi region, the Hashimutheri finally decided to only carry out trips strictly for hunting purposes and only to areas considered safe by other resident communities of the Toototobi.

Unfortunately, between December, 1993 and September, 1994, there have been 5 deaths caused by malaria falciparum in the Toototobi region, all the victims being Hashimutheri. These patients were already in a serious condition by the time they reached the Toototobi post, carried by relatives, and died a few hours after the start of treatment (see 3.4 Mortality).

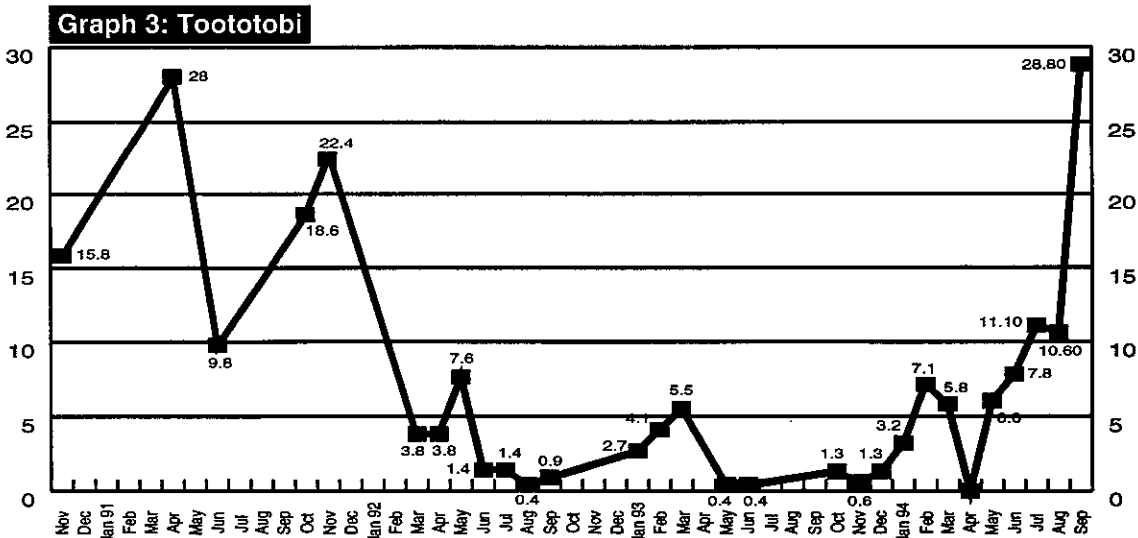
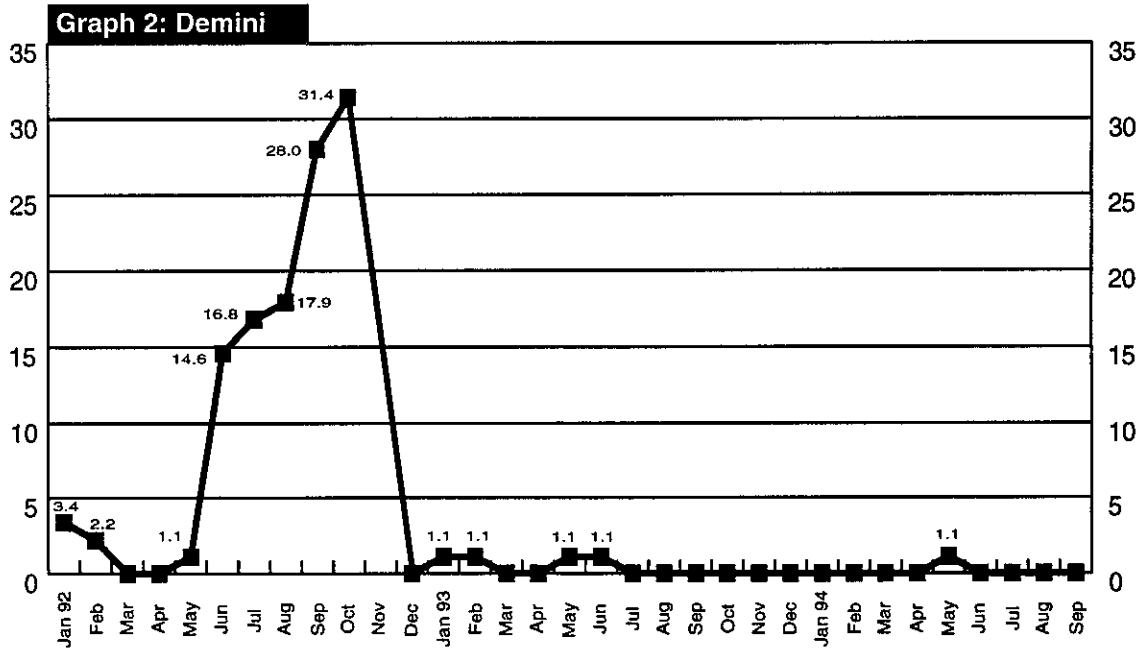
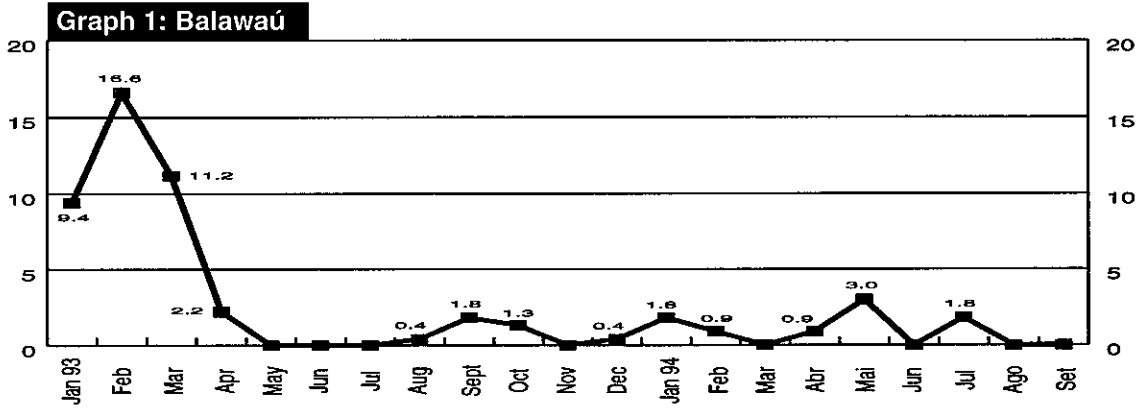
The graph showing monthly malaria incidence in the Toototobi, as compared to that of the Demini and Balawaú regions, clearly confirms the relationship between garimpeiros and the number of malaria cases, because there are no gold mining activities close to the latter two regions (graphs 1, 2 and 3).

During September, there was a total of 88 cases among the Toototobi, some still under treatment at the present time, reaching the unheard of monthly incidence level of 28.8% (graph 3).

We are intensifying our health activities in this region, and once again have urgently requested an entomological team from the FNS to eradicate foci of anopheles mosquitoes in the area.



## Monthly Percentages of Malaria Cases





## 2 - OTHER DISEASES

Compared to last year's data, other diseases such as diarrhea, skin infections, conjunctivitis and principally influenza and its resulting bacterial complications continue with a high incidence. Bacterial pneumonia continues to be the most common complication resulting from influenza. A total of 159 cases of pneumonia were diagnosed during the period covered by the report.

Attention should be called to the high number of dental cases in the Demini region (65) compared to 13 in the Balawaú and 11 in the Toototobi, especially when the Demini's smaller population of approximately one third that of the other areas is taken into account.

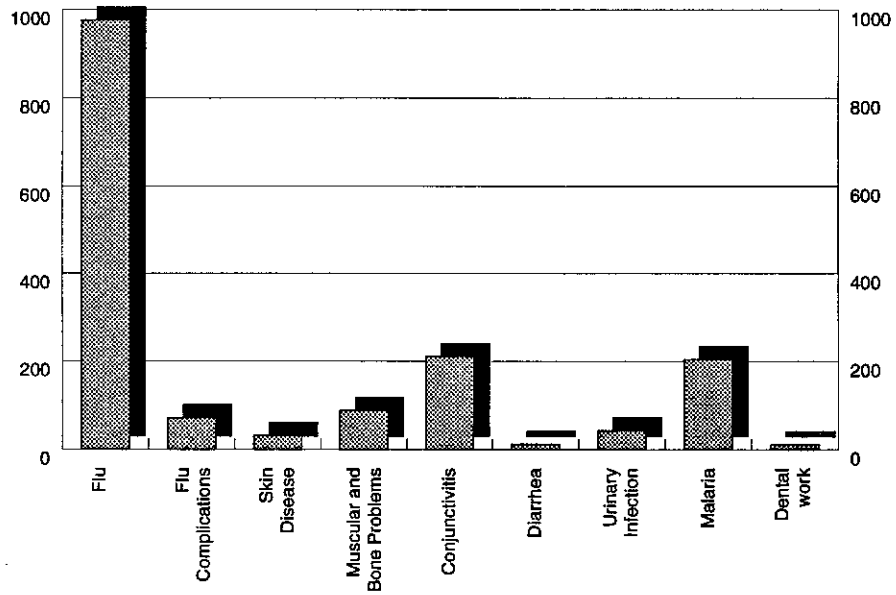
This worsening dental situation among the Demini compared to the other population groups, can be attributed to harmful changes in eating habits caused by the regular supply of sugar brought by local leader Davi Yanomami, despite our warnings as to the consequences.



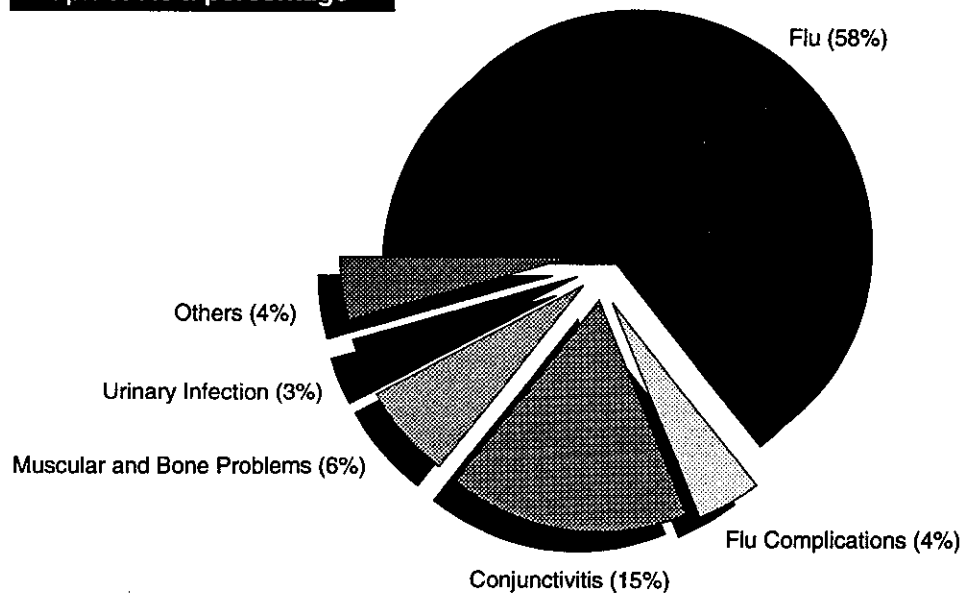
# Incidence of Disease - December 1993 to August 1994

## Toototobi - 1375 Consultations

**Graph 4: Absolute Numbers**



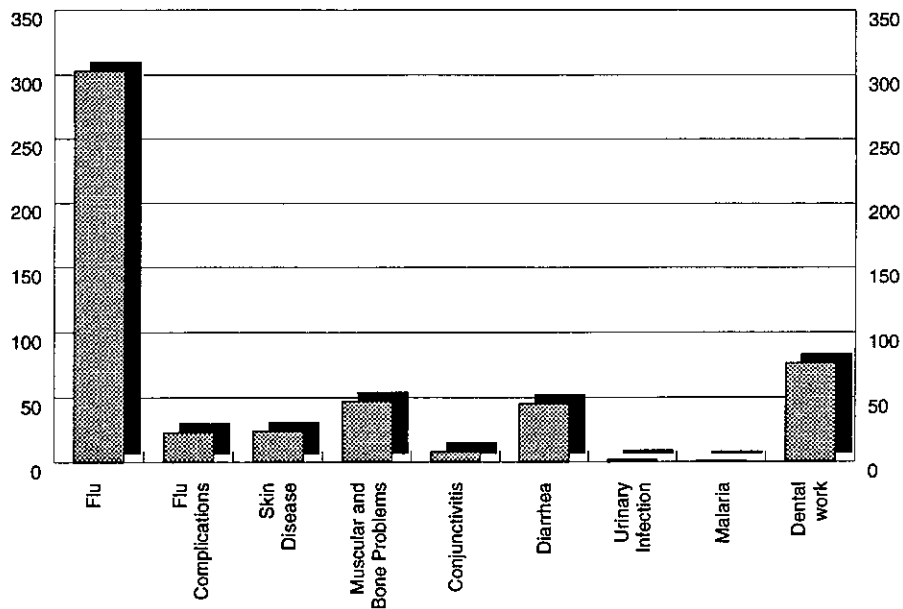
**Graph 5: As a percentage**



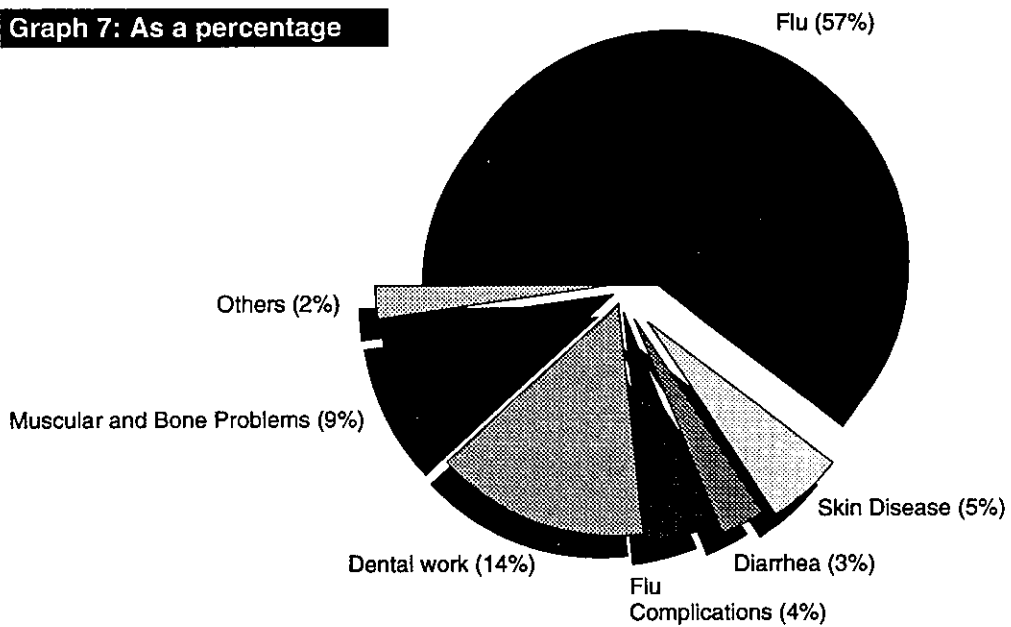
# Incidence of Disease - December 1993 to August 1994

## Demini - 450 Consultations

**Graph 6: Absolute Numbers**

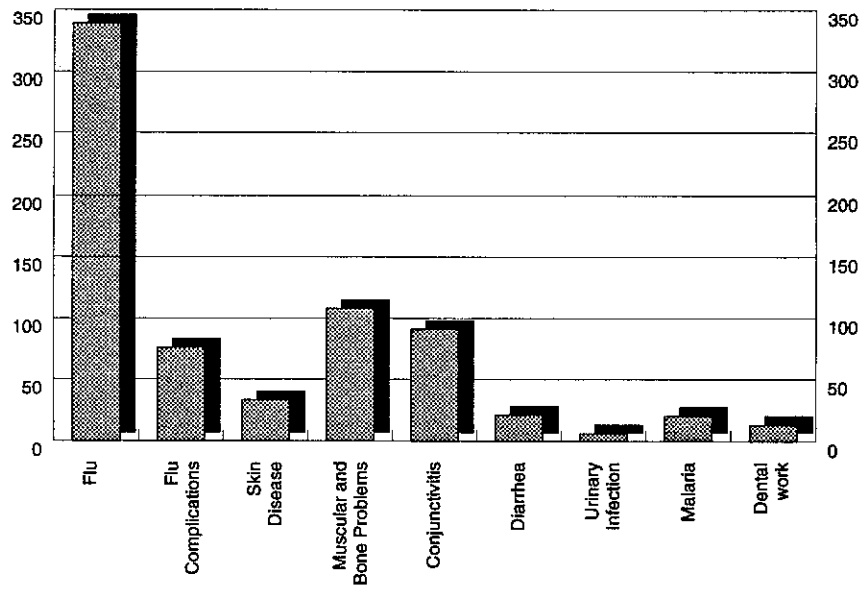


**Graph 7: As a percentage**

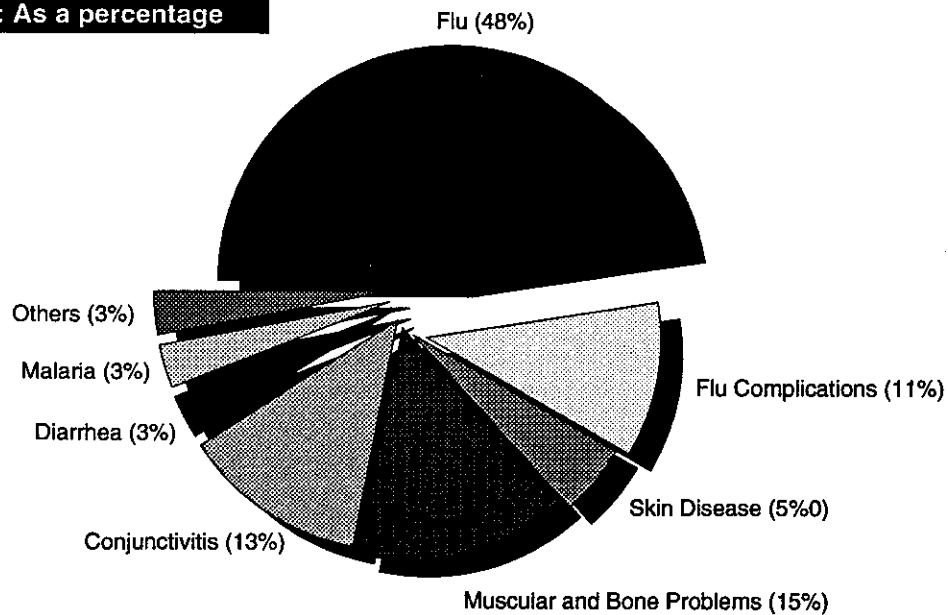


## Incidence of Disease - December 1993 to August 1994 Balawaú - 707 Consultations

**Graph 8: Absolute Numbers**



**Graph 9: As a percentage**



### 3 - EVACUATIONS

Three Yanomami were evacuated to Boa Vista for treatment:

Balawaú - intestinal blockage - surgical treatment

Toototobi - multiple injuries - orthopedic surgical treatment

Demini - amputation of a toe joint due to gangrene caused by severed blood vessel from a snake bite. Specific snake anti-venom was given within the Yanomami area.

Evacuation from the Yanomami area means extra work for the Boa Vista office due to the precarious state of the city's public health system, particularly when it comes to treating indigenous people.

### 4 -MORTALITY

Ten deaths were registered during the period December, 1993 to September, 1994.

The causes were as follows:

\* Malaria falciparum - 5

\* Injuries to the skull - 1

\* Unknown causes - 2

\* Infanticide - 2

We would like to emphasize that in the previous year there were no deaths caused by malaria, while during the period covered by this report 50% of the deaths were due to this disease.

Of the ten deaths registered, six occurred in the Hashimutheri community, meaning that 10% of this community died within a period of only ten months.



## CONCLUSION

In the light of this data, it is plain to see the correlation between illegal garimpeiro activity in the Yanomami area and the incidence of introduced disease, principally malaria.

The high incidence of malaria found in the Toototobi region compared to data presented in the April - November 1993 report, and compared to the situation current in the Balawaú and Demini regions, helps to confirm this analysis.

On the other hand, reorganization of CCPY's administrative and financial structure also hindered a more complete and immediate response to the situation, with increased investment in human resources and logistical support.

The setting up of a trained team of professionally qualified personnel, together with guaranteed adequate working conditions, continuous training and periodic supervision are preconditions for CCPY's health project being able to maintain the quality of its work and control and reduce the incidence of malaria in the Toototobi region.

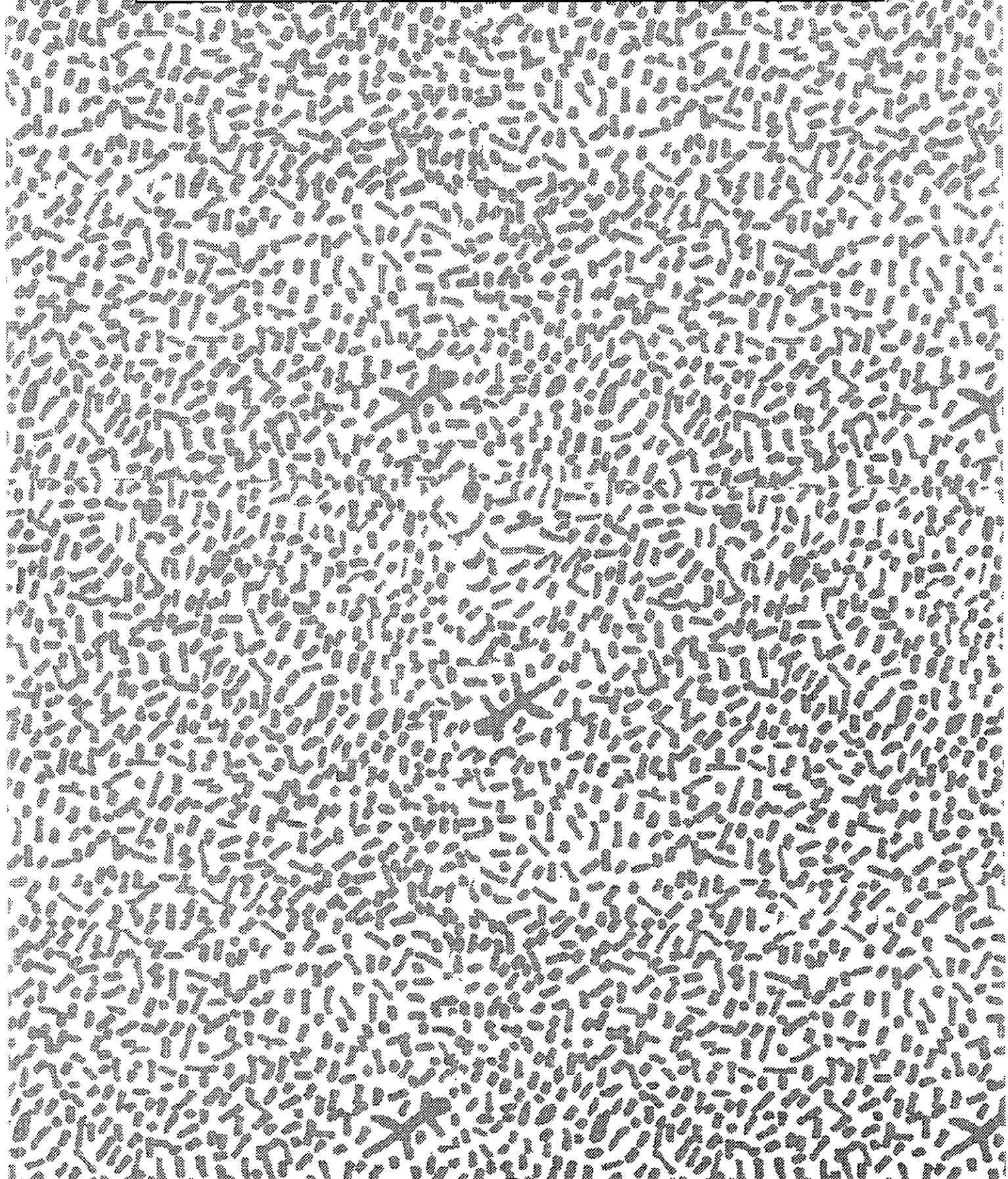
Of paramount importance is continued investment in the preparation of the Yanomami themselves, so that our work is not reduced to mere assistance.

The structural reorganization currently underway at CCPY, together with the agreement recently signed with the FNS, with World Bank funding, will ensure the means necessary to achieve these objectives.

However, for this to be successful, urgent action on the part of the competent authorities is necessary to force the withdrawal of illegal garimpeiros from the Yanomami area.



# APPENDICES







## DAVI KOPENAWA DENOUNCES GARIMPEIROS

In a letter to friends in Brazil and abroad, Davi described the worsening situation brought by the invasion of the garimpeiros. He said the goldminers are giving guns and liquor to the Yanomami and ordering them to attack other villages. He appealed to the Brazilian authorities to ban the sale of firearms in the area, and to the Venezuelans to remove the goldminers from the upper Orinoco river area where they are causing many respiratory infections and malaria.

At Toototobi where CCPY has its health project, 88 malaria cases have been registered this year so far. Before the new invasion, the incidence was 1%.


"In the Parafuri region goldminers are working and contaminating the village. The goldminers never left this area. That is why my relatives remain ill with malaria and 26 Yanomami died in 1994. In this region of Parafuri, FUNAI tried to control the malaria, but the goldminers are against the work of the National Health Foundation. Thus, Parafuri was left without medical care. There is no FUNAI post to look out for this community. The goldminers don't want FUNAI or the FNS there. They also get the Yanomami drunk on manioc beer mixed with rum which was brought especially for this purpose. Fights break out among the Yanomami who were drunk. The Yanomami get drunk quickly. There were deaths among the goldminers and the Indians.

At Pe na Cova (Foot in the Grave) landing strip, the goldminers are giving rifles and food to the Indian men, to sleep with their wives... spreading venereal diseases. Now they are contaminating the wives and husbands. It's hard to get treatment. ... I am worried they will get AIDS... When the Yanomami fall ill, the goldminers do not take care of them. They only give them diseases.

... In Xiteia there is a FUNAI post and the Consolata Mission to care for the Yanomami community. There are also goldminers around the region and they give rifles, ammunition, and liquor. This is very dangerous. I think that (they) are doing this, giving rifles, so that the Yanomami will kill other Yanomami. The goldminers are ordering them to attack other communities, other villages that have gold so that later, when the community is finished, when all the people die, the miners go to extract gold from that area. What the goldminers are doing is not random.

Therefore, I am putting my thoughts into this letter because we know that this is happening, this exchange of rifles with the Yanomami. When the Yanomami kill among themselves, the news doesn't go elsewhere. When a goldminer attacks a community, it causes him a lot of problems. He knows that the news for the goldminers, is very serious. It goes far, to Brasilia, Sao Paulo and other faraway places, to the other side of the world. All this is happening in the land of the Yanomami in order to make the Yanomami fight among themselves.

We want the Minister of Justice to ban the sale of firearms here. The goldminer has no right to buy firearms and then give them to Yanomami to kill their brothers. And we



want the whites to speak with the authorities, with FUNAI, with the Federal Police, and with the owners of the shops which sell arms so that they will stop selling them.

The Hwaximeutheri, the people who fled to Toototobi after the massacre last year, tell us that the goldminers are in the upper Orinoco river area and also along the border with Brazil. The Hwaximeutheri ask FUNAI to remove the goldminers immediately. I also want to ask the Embassy of Venezuela to tell its government to remove the goldminers from the upper Orinoco river area... (they) are causing many respiratory infections and malaria. The cases of falciparum and vivax malaria and pneumonia are increasing. The Hwaximeutheri are very worried because they are becoming weak.

When a Yanomami is sick, he cannot hunt, fish, or to plant to feed his family. When a Yanomami is healthy, he works, hunts and fishes and provides food to feed his children and his wife. Since they are sick, we want funds to buy microscopes to see the disease that is attacking our people. Without the white man's medicines, diseases such as malaria and pneumonia cannot be cured.

The Yanomami die. Therefore, we urgently need your help to finance health professionals like nurses, doctors, and laboratory technicians to care for the health of the Yanomami people.

.... Our preoccupation for the Yanomami is that the incidence of disease is increasing greatly in other places in Roraima and Amazonas states and it can spread to our villages."

## NUMBER OF DAYS WORKED BY EACH HEALTH PROFESSIONAL IN THE FIELD

Health Professional	Job	1992	1993	1994									Total Days	
				J	F	M	A	M	J	J	A	S		
Deise A. Francisco	Doctor	115	58	T	T	.	.	.	.	.	.	.	.	187
Claudio E. Oliveira	Doctor	.	130	B	T	D	B	B	B	.	.	T	189	
Laurício O. Farias	Nurse	.	.	.	B	B	.	B	B	.	.	.	114	
M. Conceição S. Souza	Nurse	.	99	T	.	T	T	.	.	.	.	.	179	
Wesley C. Thomé	Nurse	.	.	.	T	.	.	.	.	.	.	.	32	
Douglas F. O. Porto	Nurse	.	.	.	.	.	.	T	T	.	T	.	60	
Carlo Zaccuini		-	-	.	B	B	.	.	.	.	.	.	13	
Jorge André Gurjão	Assist. Nurse	45	223	T	.	T	T	.	T	D	.	T	439	
Bruce Albert		-	-	.	.	.	.	.	.	D	D	.	22	
Gal Gomez		-	-	.	.	.	.	.	.	D	D	.	22	
João das Neves Filho	Assist. Nurse	.	246	.	B	D	.	B	D	B	.	B	421	
Francileuza Bandeira	Assist. Nurse	.	93	.	.	.	.	T	B	.	B	T	192	
Elizonete S. Lopes	Assist. Nurse	.	90	.	.	.	.	.	T	T	.	.	158	
Denise C. Dias	Nurse	.	.	.	.	.	.	.	.	.	D	.	27	
José Almir C. Alves	Assist. Nurse	.	102	D	D	.	D	D	.	.	.	.	221	
Ita Saldanha Saraiva	Assist. Nurse	.	99	B	.	.	.	.	.	.	.	.	122	
Marcos T. do Carmo	Microsc. Oper.	153	218	B	.	B	B	.	B	B	B	T	535	
Paulo Grouwndson	Microsc. Oper.	.	.	.	.	.	.	.	T	.	T	T	84	
Manuel Cruz de Souza	Microsc. Oper.	.	167	T	T	.	.	B	T	.	.	.	302	
Dionizio Miranda	General Serv.	.	202	.	B	B	B	B	.	B	B	B	406	
Luis C. Pinagé	Exec. Dir.	.	.	.	.	.	.	.	.	.	.	T	8	
Francinildo F. da Silva	Assist. Nurse	.	.	.	.	.	.	.	.	.	D	.	30	
Marcos Pellegrini	Doctor / FNS	.	.	.	.	.	.	.	.	.	.	T	8	
Fernando Buzza	UFRJ / FNS												8	

\* T = Toototobi B = Balawá D = Demini

\* Total number of days worked in the field corresponds to 1993 figures added to 1992.

Note: The doctor's presence in the Demini occurred on 6 occasions to attend to cases needing a medical evaluation.