DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
and Prevention (CDC)

Memorandum

Date September 15, 1997

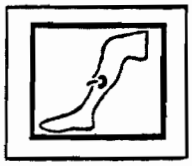
From WHO Collaborating Center for
Research, Training, and Eradication of Dracunculiasis

Subject GUINEA WORM WRAP-UP #71

To Addressees

Detect Every Case, Contain Every Worm!

SUDAN: REDUCED CASES IN NORTHERN STATES AND WESTERN EQUATORIA



SUDAN GWEP

The ten northern states of Sudan have reported a total of 233 cases in January-July 1997, compared to 890 cases during the same period of 1996. This is a reduction of 74%, and it includes an even greater reduction of 91% in the most highly endemic of the northern states, West Kordofan (from 745 cases last year to 64 cases so far this year). The same states reduced their incidence by 57% in 1996 compared to 1995. As of this year, the rates of reporting in the northern states have averaged 71%, which is about the same as their average reporting rate of 75% in 1996.

Meanwhile, West Equatoria State in the southern part of the country reports 1,816 cases in January-June 1997, compared to 4,973 cases reported for the same period of 1996. This is a reduction of 64% in reported incidence there, despite a 12% increase in reporting rates for that state this year compared to last year. Unfortunately, the average rates of monthly reporting for Sudan as a whole are still significantly lower in 1997 so far (32%) than in 1996 (47%), because of increased disruption this year in the highly endemic southern states from the civil war.

In July, the Sudan Guinea Worm Eradication Program (SGWEP) convened its first regional review for state programs in endemic areas accessed by the Government of Sudan in Upper Nile Zone, at Sennar. Similar regional program reviews have since been held in Wau (Bahr al Ghazal) and in Khartoum for El Obeid (Kordofan). In August, the SGWEP Secretariat in Khartoum also began holding detailed reviews of data from one individual state several times each week. Sudan accounts for 61% of the cases of dracunculiasis reported globally so far this year.

WORLD BANK, CARTER CENTER ESTABLISH GUINEA WORM TRUST FUND

World Bank

THE CARTER CENTER

The World Bank has established a special Guinea Worm Eradication Trust Fund, for which The Carter Center is the executing agency. The Trust Fund was established following an agreement between World Bank president Mr. James Wolfensohn and Carter Center President Jimmy Carter. The purpose of the Fund is to facilitate activities being undertaken by Global 2000/The Carter Center in support of focused eradication measures during the final stage of the campaign. Approximately $1.5 million has been donated to the Trust Fund so far. As of this date, the main donors

to the Trust Fund include Norway, the Kuwait Fund for Arab Economic Development, the Canadian International Development Agency (CIDA), and Luxemburg. Several other donors are considering providing support through this channel.

NIGERIA: INCREASED SUPPORT FOR WATER SUPPLY; MORE CASES TO CAMEROON

The Petroleum Trust Fund, an agency of the Federal Government of Nigeria, has reportedly agreed in principle to fund the building of borehole wells in all remaining endemic villages in Nigeria. No starting date or implementation plan have yet been established, however. The agreement came in follow-up to an appeal by former U.S. President Jimmy Carter during his visit to Nigeria at the end of July. Local Rotarians have also agreed to provide safe sources of drinking water for 53 endemic communities in Ogun State, according to a report from Southwest Zonal Facilitator Prof. O. O. Kale. The new water and environmental sanitation chief for UNICEF/Nigeria, Mr. Mansoor Ali, has also expressed his agency's desire to help ensure availability of safe water to all remaining unserved endemic villages in Nigeria. Mr. Mansoor participated in a meeting of the Steering Committee for the Nigerian program in Lagos on September 2. This was the first steering committee meeting that the Nigerian program has held since January 1997. So far this year, Nigeria reports a reduction of only 5% in cases of dracunculiasis, compared to the same period of 1996 (Figure 1, Table 1).

Figure 1

PERCENTAGE OF ENDEMIC VILLAGES REPORTING AND PERCENTAGE CHANGE IN NUMBER OF CASES OF DRACUNCULIASIS DURING 1996 AND 1997*, BY COUNTRY

COUNTRY	ENDEMIC VILLAGES: 1997		CASES REPORTED		% CHANGE : 1996 - 1997
	NUMBER	% REPORTING	1996	1997	
INDIA (8)	3	100	9	0	-100
MAURITANIA (3)	142	NR	16	2	-88
YEMEN (7)	9	100	55	7	-87
CHAD (6)	13	100	92	16	-83
MALI (7)	452	81	968	391	-60
COTE D'IVOIRE (8)	226	91	2518	1007	-60
BENIN (7)	341	91	585	302	-48
BURKINA FASO (8)	349	26	2718	1512	-44
SUDAN (6)	5593	35	45492	27861	-39
TOGO (7)	249	NR	820	585	-29
UGANDA (7)	386	99	1304	1201	-8
NIGERIA (7)	1593	92	8975	8509	-5
CAMEROON (7)**	13	100	0	0	0
NIGER (8)	416	99	1700	1924	13+
ETHIOPIA (8)	57	99	340	408	20+
GHANA (7)	1028	100	3860	6747	75+
SENEGAL (7)	7	100	2	4	100+
TOTAL***	10877	62	69454	50484	-27
TOTAL WITHOUT SUDAN ***	5284	90	23962	22623	-6

(3) Reports for Jan. - Mar. 1997
(6) Reports for Jan. - June 1997
(7) Reports for Jan. - July 1997
(8) Reports for Jan. - Aug. 1997

NR Not Reported
* Provisional
** Reported 1 case in June and 7 cases in July imported from Nigeria.
*** Includes 8 cases imported into Cameroon from Nigeria.

Table 1

NUMBER OF CASES CONTAINED AND NUMBER REPORTED BY MONTH DURING 1997*
(COUNTRIES ARRANGED IN DESCENDING ORDER OF CASES IN 1996)

COUNTRY	# OF ENDEMIC VILLAGES: 1/1/97	# OF CASES IN 1996	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
			JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	5114	118578	1965 / 3590	840 / 1317	5286 / 8343	2443 / 6824	2866 / 6580	778 / 1207	/	/	/	/	/	/	14178 / 27861	51
NIGERIA	1353	12282	983 / 1148	1294 / 1332	878 / 1020	797 / 901	970 / 1110	1092 / 1475	1143 / 1523	/	/	/	/	/	7157 / 8509	84
GHANA	602	4877	1498 / 1685	1182 / 1625	904 / 1226	680 / 909	583 / 652	272 / 376	194 / 274	/	/	/	/	/	5313 / 6747	79
BURKINA FASO	337	3241	6 / 7	30 / 37	45 / 79	39 / 73	49 / 322	122 / 366	108 / 477	19 / 151	/	/	/	/	418 / 1512	28
NIGER	416	2956	3 / 7	0 / 0	2 / 4	5 / 14	33 / 59	216 / 413	296 / 570	500 / 857	/	/	/	/	1055 / 1924	55
COTE D'IVOIRE	216	2794	148 / 156	166 / 177	109 / 140	130 / 171	134 / 153	59 / 60	96 / 96	54 / 54	/	/	/	/	896 / 1007	89
MALI	430	2402	25 / 44	11 / 11	4 / 4	8 / 18	23 / 30	75 / 104	133 / 180	/	/	/	/	/	279 / 391	71
TOGO	249	1626	68 / 120	23 / 36	47 / 57	28 / 77	31 / 100	25 / 50	73 / 145	/	/	/	/	/	295 / 585	50
UGANDA	327	1455	6 / 7	1 / 6	27 / 36	110 / 197	295 / 596	160 / 243	83 / 116	/	/	/	/	/	682 / 1201	57
BENIN	325	1427	98 / 112	38 / 39	15 / 19	74 / 77	28 / 28	17 / 17	4 / 10	/	/	/	/	/	274 / 302	91
MAURITANIA	143	562	1 / 1	0 / 0	1 / 1	/	/	/	/	/	/	/	/	/	2 / 2	100
ETHIOPIA	57	371	4 / 5	2 / 2	7 / 7	40 / 43	76 / 106	110 / 128	62 / 65	51 / 52	/	/	/	/	352 / 408	86
CHAD	12	127	2 / 2	2 / 2	6 / 6	1 / 1	1 / 1	4 / 4	/	/	/	/	/	/	16 / 16	100
YEMEN	7	62	0 / 0	0 / 0	1 / 1	1 / 1	2 / 4	1 / 1	0 / 0	/	/	/	/	/	5 / 7	71
SENEGAL	7	19	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	1 / 1	/	/	/	/	/	4 / 4	-
CAMEROON**	13	17	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	/ 7	/	/	/	/	/	1 / 8	13
INDIA	3	9	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	0 / 0	-
TOTAL*	9611	152805	4807 / 6884	3589 / 4584	7332 / 10943	4356 / 9306	5091 / 9741	2935 / 4448	2193 / 3464	624 / 1114	0 / 0	0 / 0	0 / 0	0 / 0	30927 / 50484	61
% CONTAINED			70	78	67	47	52	66	63	56	-	-	-	-	61	

* Provisional

** Reported 1 case in June and 7 cases in July imported from Nigeria.

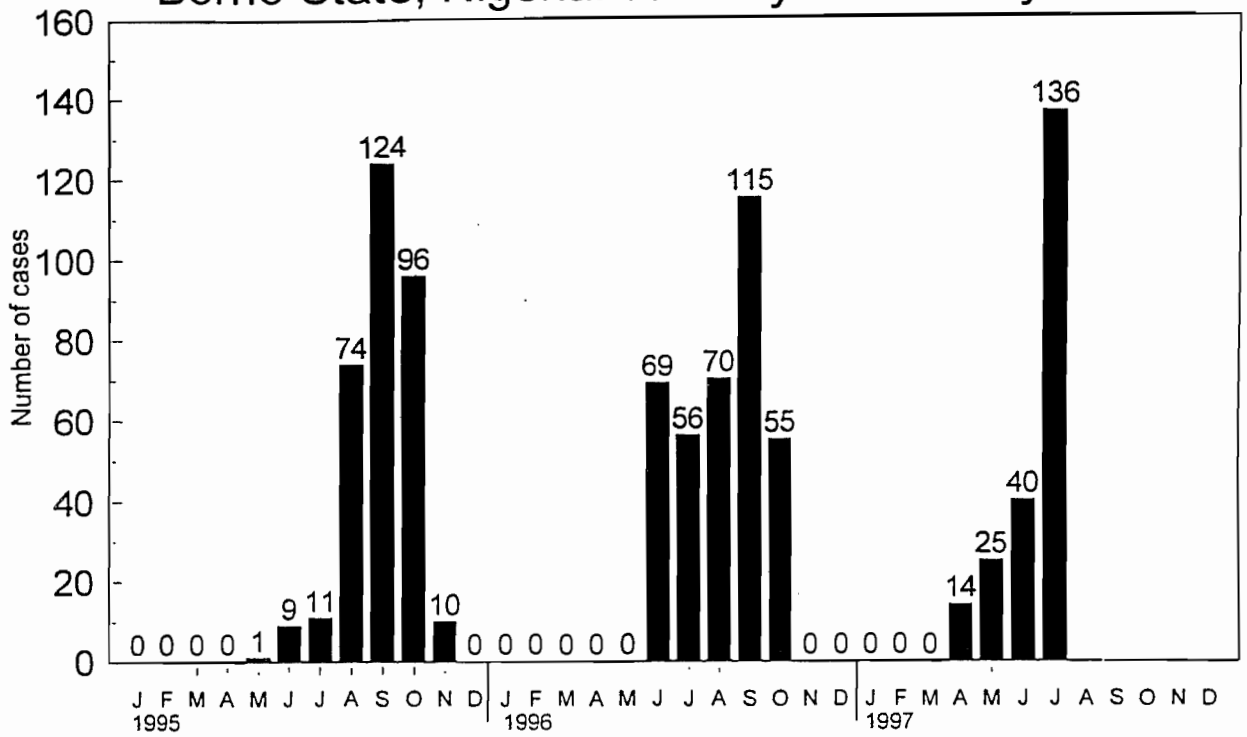
Representatives from Guinea Worm Eradication Programs in the border areas of northeast Nigeria and Zinder Department of Niger met in Magaria, Zinder on August 26 to review the status of program activities on both sides of the border (Zinder Department of Niger, and Kano and Jigawa States of Nigeria). One problem common to both programs that was discussed is small "satellite settlements" surrounding larger known endemic villages. The smaller settlements become increasingly important foci of dracunculiasis after interventions reduce transmission in the main villages. Participants at the meeting also exchanged experiences on the use of Tamale oil. One case that was allegedly imported into Yobe State, Nigeria from Niger in July, was reported just before the border meeting began. A previous Niger-Nigeria border meeting was held in Babura Local Government Area (LGA) of Nigeria on May 6. The next meeting is scheduled to be held in Sule Tankarkar LGA of Nigeria's Jigawa State on November 27.

Meanwhile, Cameroon reports seven cases imported into Amchide, Cameroon in July from Cha-Chile village in Bama LGA of Nigeria's Borno State (Figures 2, 3; Table 2). According to Dr. Dama Mana of Cameroon, all seven patients live in Amchide, Cameroon and all were allegedly infected from the same water point while tending their farms just across the border in Cha-Chile, Nigeria. These seven cases and one other reportedly imported from Bama LGA in Nigeria in June are the only cases reported in Cameroon through July this year. Mr. Ben Nwobi, zonal facilitator for Northeast Zone of Nigeria, reports that one of the seven imported patients reported by Cameroon was seen by the LGA GW coordinator in Nigeria, but refused to have his worm attended to in Nigeria, prefering instead to collect a cash reward for presenting himself for treatment in Cameroon. Cameroon now offers a cash reward of up to 22,000 CFA (about US $45) for each case of dracunculiasis. Nigeria does not yet offer a cash reward for reporting or treating a case. Staff of the Nigerian and Cameroonian programs are tentatively scheduled to meet on September 17 at Banki Health Post in Bama LGA, Nigeria. Other known international importations of dracunculiasis cases so far this year are summarized in Table 2 and Figure 3. *[EDITORIAL NOTE: We do not yet know whether the 7 imported cases reported by Cameroon were contained or not (Table 1). That information will be critical to documenting, to the satisfaction of the International Commission for Certification of Dracunculiasis Eradication, whether or not Cameroon will have had any indigenous casses in 1997.]*

MOPTI REGION OF MALI INCREASES HEALTH EDUCATION AND ABATE USAGE

Mopti, the most highly endemic region of Mali, continues to make steady progress. In January-July 1997, it reported 200 cases, of which 172 (86%) were contained. This is a reduction of 48% from the 383 cases that were reported in the region during the same period of 1996. In August 1997, 15 of the most difficult higher endemic villages (out of a total of 149 endemic villages) were targeted for an evening program of discussions, contests, dancing, and a video about Guinea worm disease in each village. The regional coordinator and three university students from the area of each village participated in the visits, which were funded by UNICEF. Mopti Region now has 28 persons supplied and trained to use Abate in its most endemic areas. Forty-seven (47) water sources were treated with Abate in 17 endemic villages of this region in July 1997, compared to 15 sources in 7 villages in July 1996. Kayes Region, which was the second highest endemic region when Mali began its Guinea Worm Eradication Program, has reported only 25 cases in January-July 1997, as compared to 131 cases in the same period last year, for a reduction of 81%. Eighty-eight percent of the cases in Kayes this year have been contained. Overall, Mali has reduced its incidence by 60% so far this year, which is one of the two best rates of reduction in the high-moderately endemic countries (Côte d'Ivoire is the other) (Figure 1).

Figure 2 Reported Cases of Dracunculiasis, Bama LGA, Borno State, Nigeria: January 1995 - July 1997



Reported Cases of Dracunculiasis, Cameroon: January 1995 - July 1997

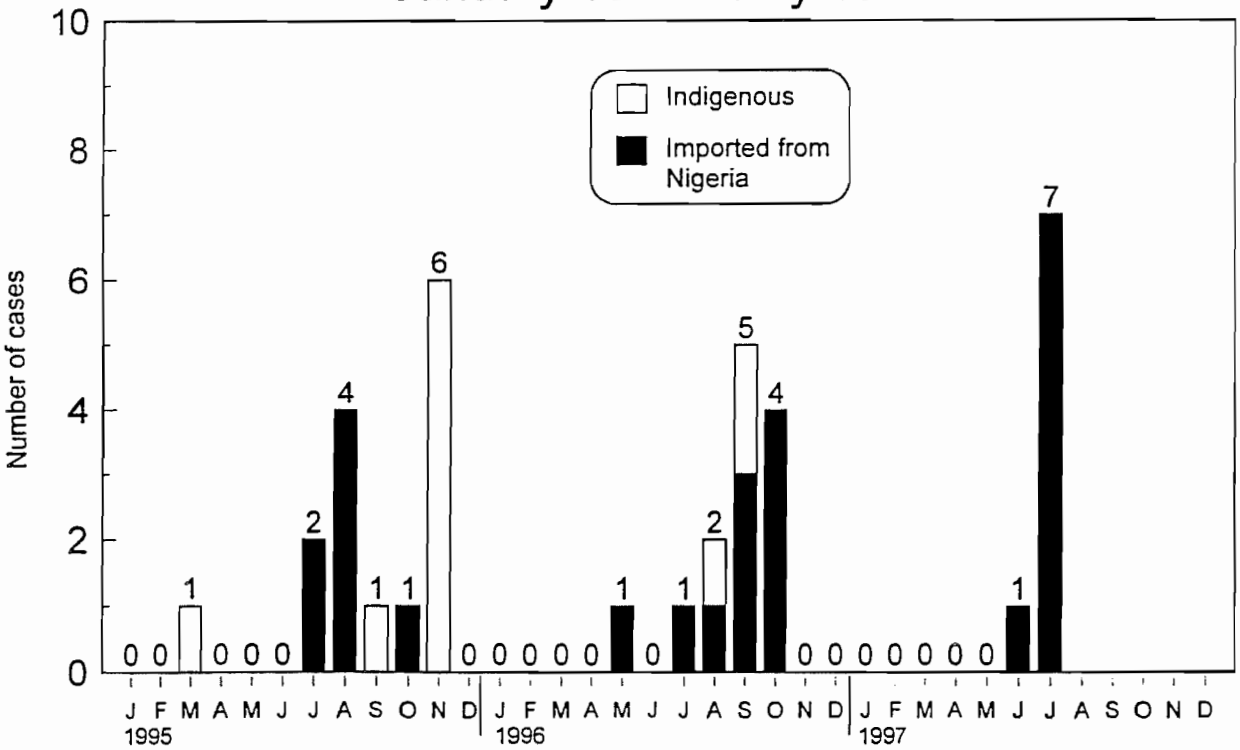


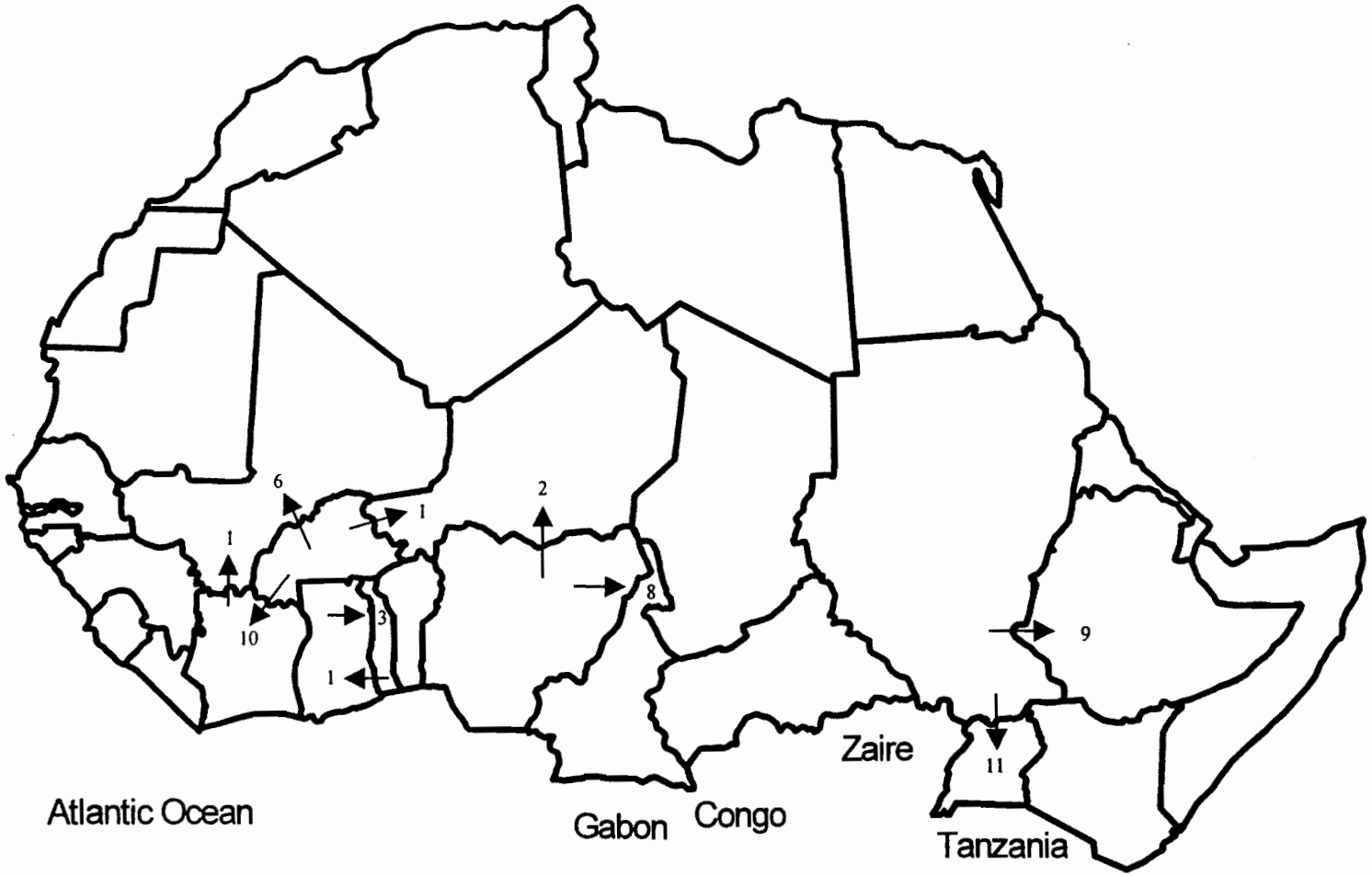
Table 2

Dracunculiasis Eradication Campaign
Reported Importations of Cases of Dracunculiasis: Jan.-Aug.1997

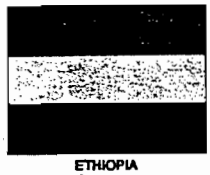
From	To	Month	Cases		
			Number	Contained	Cross notified
Burkina Faso	Mali	January	2	2	0
		June	1	1	1
		July	3	?	3
	Côte d'Ivoire	June	2	1	2
		July	1	1	1
		August	7	1	6
	Niger	July	1	?	1
Côte d'Ivoire	Mali	June	1	1	0
Ghana	Togo	January	3	1	3
Nigeria	Niger	March	1	1	1
		June	1	1	1
	Cameroon	June	1	1	1
		July	7	?	7
Togo	Ghana	June	1	0	1
Sudan	Uganda	March	3	3	3
		July	6	1	6
		August	2	2	2
	Ethiopia	February	3	3	0
		March	2	2	2
		April	1	1	0
		May	1	0	1
		June	1	1	1
		July	1	1	1
Total			52	25	44

Figure 3

Dracunculiasis Eradication Campaign
Reported Importations of Cases of Dracunculiasis: Jan. - Aug. 1997



ETHIOPIA: VILLAGE-BY-VILLAGE LISTING FOR SOUTH OMO



Ethiopia's Dracunculiasis Eradication Program (EDEP) has inaugurated a village-by-village listing of the 31 known endemic villages in South Omo Region, as an efficient means for maintaining an up-to-date overview of the status of interventions and disease incidence in each village (Table 3). Similar lists of individual endemic villages were used in Pakistan towards the end of that program, and in Cameroon and Yemen. So far, Ethiopia has reported 20% more cases this year than in the same period of 1996. *[EDITORIAL NOTE: At this stage of the global program, village-by-village lists are appropriate for district level supervisors in all endemic areas, and for national program coordinators of all of the least endemic countries. All external partners need to help the Ethiopian program to complete preparations and obtain all necessary resources by the end of this year in order to stop transmission in Ethiopia in 1998.]*

President Jimmy Carter discussed the special challenge of dracunculiasis in South Omo with Prime Minister Meles Zenawi during a visit to Addis Ababa in August. President Carter, who was in the country primarily for an agricultural meeting that was co-sponsored by the Sasakawa Africa Association and The Carter Center (Global 2000), was accompanied on the visit by Carter Center executive director Dr. John Hardman and Global 2000 director of operations Mr. Andrew Agle.

WHO PROVIDES GRANTS TO ENDEMIC COUNTRIES, CONTINUES CERTIFICATION PROCESS

WHO has received requests and complete documentation from 37 additional countries wishing to be certified as free of dracunculiasis by the International Commission for Certification of Dracunculiasis Eradication. An International Certification Team is scheduled to investigate the absence of dracunculiasis in Egypt in November 1997. The Third Meeting of the Commission is scheduled to be held in Geneva on February 19-20, 1998.

WHO has provided support to several national Guinea worm programs to enhance surveillance and/or pre-certification activities. This assistance is based on activities planned in agreement with national program managers.

Benin	US $15,000	Cameroon	US $12,500
Central African Republic	US $4,200	Chad	US $31,000
Côte d'Ivoire	US $17,000	Gambia	US $4,000
Guinea	US $6,000	India	US $17,000
Mauritania	US $15,000	Niger	US $25,000
Nigeria	US $25,000	Senegal	US $22,000
Sudan	US $121,000	Togo	US $8,000
Yemen	US $17,000		

Table 3

SOUTH OMO DRACUNCULIASIS ERADICATION PROGRAM (SODEP)
STATUS OF INTERVENTIONS BY VILLAGE: JAN. - AUG. 1997

Village Code	Village Name	No. of Households	No. of New Cases	No. Cases Contained	No. Filters Distributed	No. of Ponds	Ponds Treat.	No. Safe Water Pts.	No. Health Edu. Sessns	No. of Med. Kits avail.	No. of Med Kits refilled	No. of Sup Visits	Comments
16	Ejem	466	124	92	550	2	1	1	weekly	2	2	weekly	
21	Achuka	72	36	35	90	1	1	0	weekly	3	0	weekly	
10	Pullukol	79	26	25	0	0	0	2	weekly	0	0	weekly	
20	Kawlegna	108	22	19	208	1	0	0	weekly	3	1	weekly	
18	Lowuse	49	20	20	183	1	1	0	weekly	2	0	weekly	
22	Kangaten	151	19	15	110	0	0	4	weekly	1	1	weekly	1 pump not working
23	Aipa	55	18	18	85	0	0	0	weekly	1	1	weekly	
25	Lotome	76	18	18	60	0	0	0	weekly	2	0	weekly	
19	Lomotoy	76	15	14	243	0	0	0	monthly	4	1	monthly	
29	Kopria	116	12	10	110	0	0	0	weekly	0	0	2/month	Road Problems
7	Loger	98	11	7	0	0	0	1	weekly	0	0	weekly	
4	Jonal	121	10	7	0	0	0	1	weekly	0	0	weekly	
14	Ariapa	115	9	8	0	0	0	3	weekly	0	0	weekly	
27	Napotokoit	197	8	8	0	0	0	3	weekly	1	1	2/month	Road Problems
28	Shunkura	99	8	8	220	1	0	0	weekly	1	1	weekly	
11	Arong	104	4	4	0	0	0	4	weekly	0	0	weekly	
15	Lobor	65	4	3	50	1	0	2	weekly	0	0	weekly	
24	Lexawi	24	4	4	80	0	0	0	weekly	0	0	weekly	
8	Lopiding	105	3	3	70	0	0	0	weekly	1	1	weekly	
17	Acheya	60	3	3	50	1	0	0	weekly	3	0	weekly	
26	Narogoid	38	3	3	0	0	0	0	weekly	0	0	weekly	
2	Lokodo	72	2	2	0	0	0	0	weekly	0	0	weekly	
5	Kaile	74	3	2	0	0	0	0	weekly	0	0	weekly	
3	Lopeyok	53	1	1	0	0	0	0	weekly	0	0	weekly	
1	Mechar	75	0	0	0	0	0	1	weekly	1	1	weekly	
6	Ailla	72	0	0	0	0	0	1	weekly	0	0	weekly	
4	Esekon	71	0	0	0	0	0	0	weekly	0	0	weekly	
12	Lokoroma	36	0	0	0	0	0	1	weekly	0	0	weekly	
13	Kapuko	29	0	0	0	0	0	2	weekly	0	0	weekly	
30	Kakula	124	0	0	0	0	0	2	weekly	0	0	2/month	Road Problems
31	Naila	504	NR	NR	NR	NR	NR	NR	once	0	0	once	Difficult to Reach
	Total	3,384	383	329	2,109	8	3	28		25	10		

NR: No Report

IN BRIEF:

Benin will hold a workshop on October 1-2 for re-training health workers in the Guinea Worm Eradication Program, using support provided by WHO. UNICEF is supporting similar re-training in Côte d'Ivoire. Mr. Harry Godfrey made brief consultations to the programs in Côte d'Ivoire and Benin in August-September, with the support of Global 2000.

Togo. Mr. Mohammed Salissou Kane of the Niger Guinea Worm Eradication Program has been engaged by Global 2000 as a consultant to help with Abate training in Togo (September 16-20) at the request of Togo's national program coordinator, Mr. K. Ignace Amegbo. Mr. Kane arrived in Togo on September 13.

Ghana. An evaluation of Ghana's Guinea Worm Eradication Program is scheduled to begin on October 20.

India. Dr. Olavi Elo, WHO Representative to India, informed the WHO Collaborating Center that India's National Institute of Communicable Diseases has confirmed the absence of cases of dracunculiasis since August 1996. The absence of any reported cases during the last 13 months during which cases were actively sought by the surveillance system, including through the offers of rewards, indicates the likelihood that India's Guinea Worm Eradication Program has halted all transmission of the disease. **Congratulations, India!!!**

Senegal. Matam District in northeastern Senegal observed Guinea Worm Day on August 21. The occasion included a ceremony at Appe Diaobe, which was attended by administrative, health, and water supply officials; representatives of WHO, UNICEF, and CDC; National Field Supervisor Mr. Georges N'Diaye; and the national program coordinator, Dr. Abou Bekr Gaye. All four cases reported in Senegal so far in 1997 were in the village of Koyeneingruil in Matam District. After consulting in Senegal, CDC's Mr. Mark LaPointe also made a brief visit to Mauritania.

Dr. Alhousseini Maiga traveled to Atlanta and Geneva in late August for consultations on the status of eradication efforts with Global 2000 and CDC, and WHO headquarters staff, respectively.

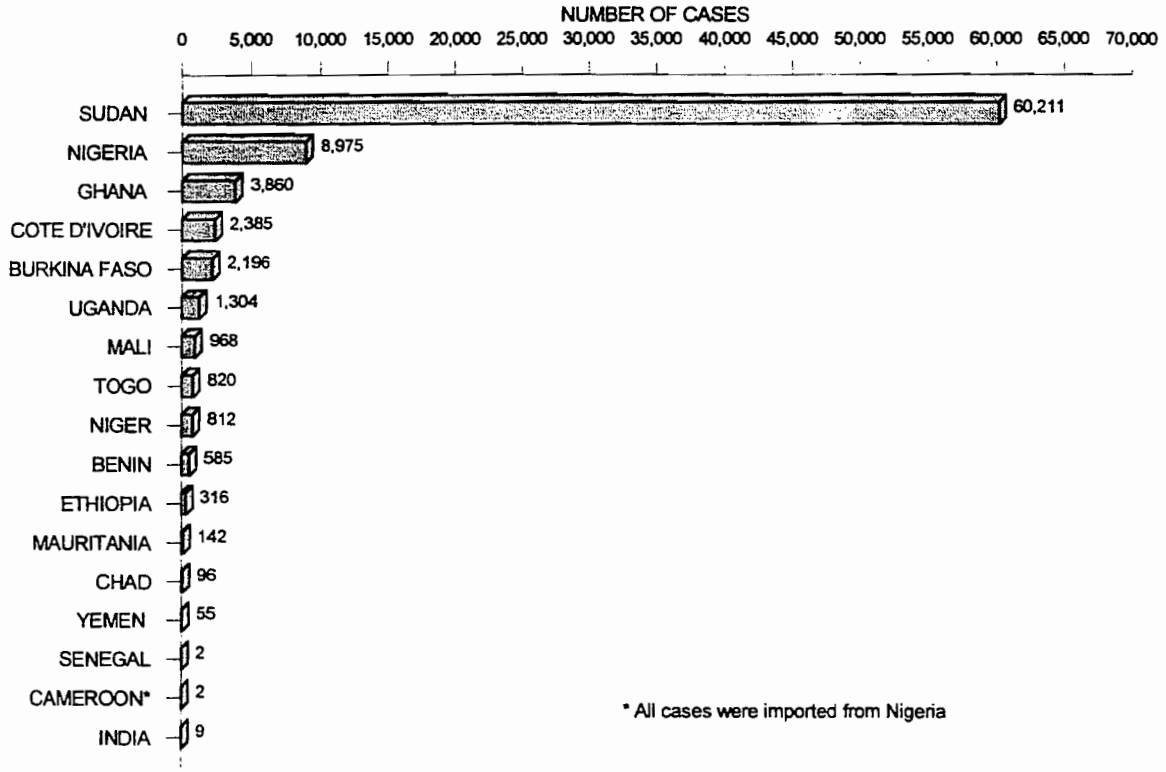
Dr. Anders Seim left the Dracunculiasis Eradication Unit at WHO headquarters in July. He continues his active support for eradication of dracunculiasis and of lymphatic filariasis as the founder of Health and Development International (HDI), a non-profit Non-Governmental Organization. HDI continues to offer limited funding for cash rewards for reporting cases of dracunculiasis to programs in the final stages of eradication. Dr. Seim may be contacted at Chemin de la Dole 24, CH-1297 Founex, Geneva, SWITZERLAND. Telephone and fax numbers: +41-22-776 9977.

RECENT PUBLICATIONS

Hopkins DR, 1997. Dracunculiasis eradication [letter]. Lancet, 350:812, Sept 13.

Cairncross S, Periès H, Cutts F, 1997. Authors' reply [letter]. Lancet, 350:812-813, Sept 13.

Figure 4. DISTRIBUTION BY COUNTRY OF 82,738 CASES OF DRACUNCULIASIS REPORTED: JANUARY - JULY 1996



DISTRIBUTION BY COUNTRY OF 49,370 CASES OF DRACUNCULIASIS REPORTED: JANUARY - JULY 1997

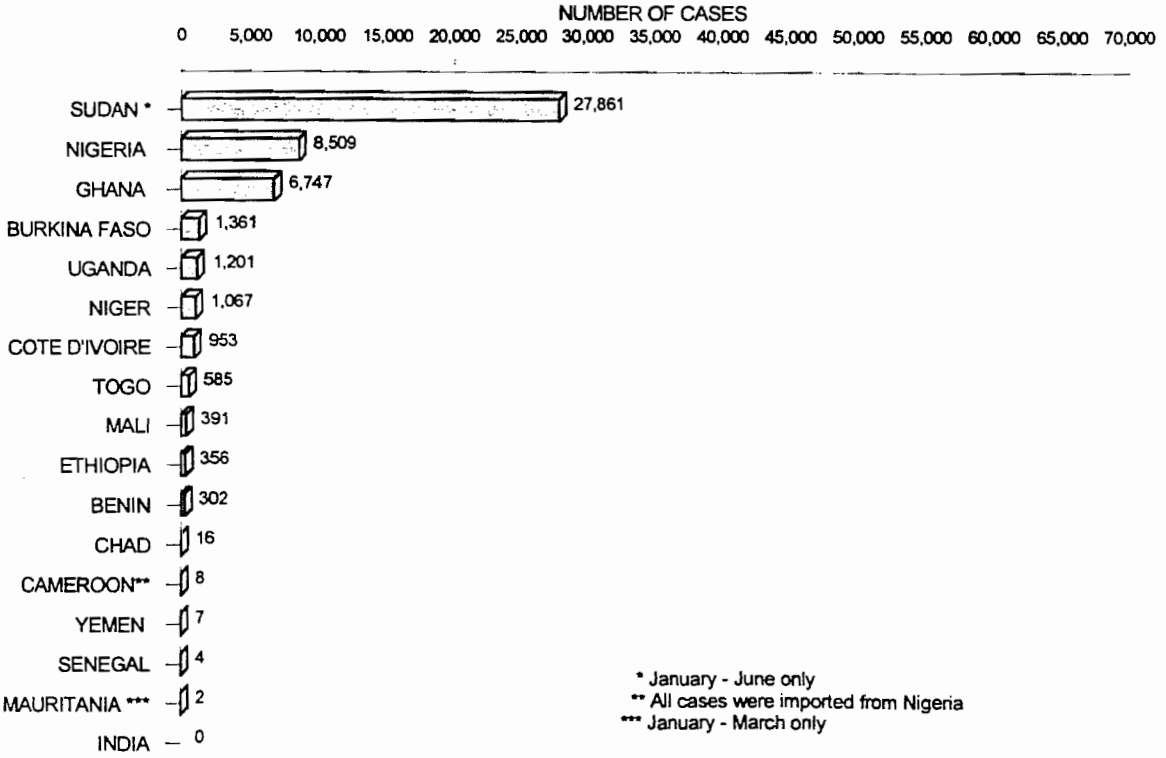
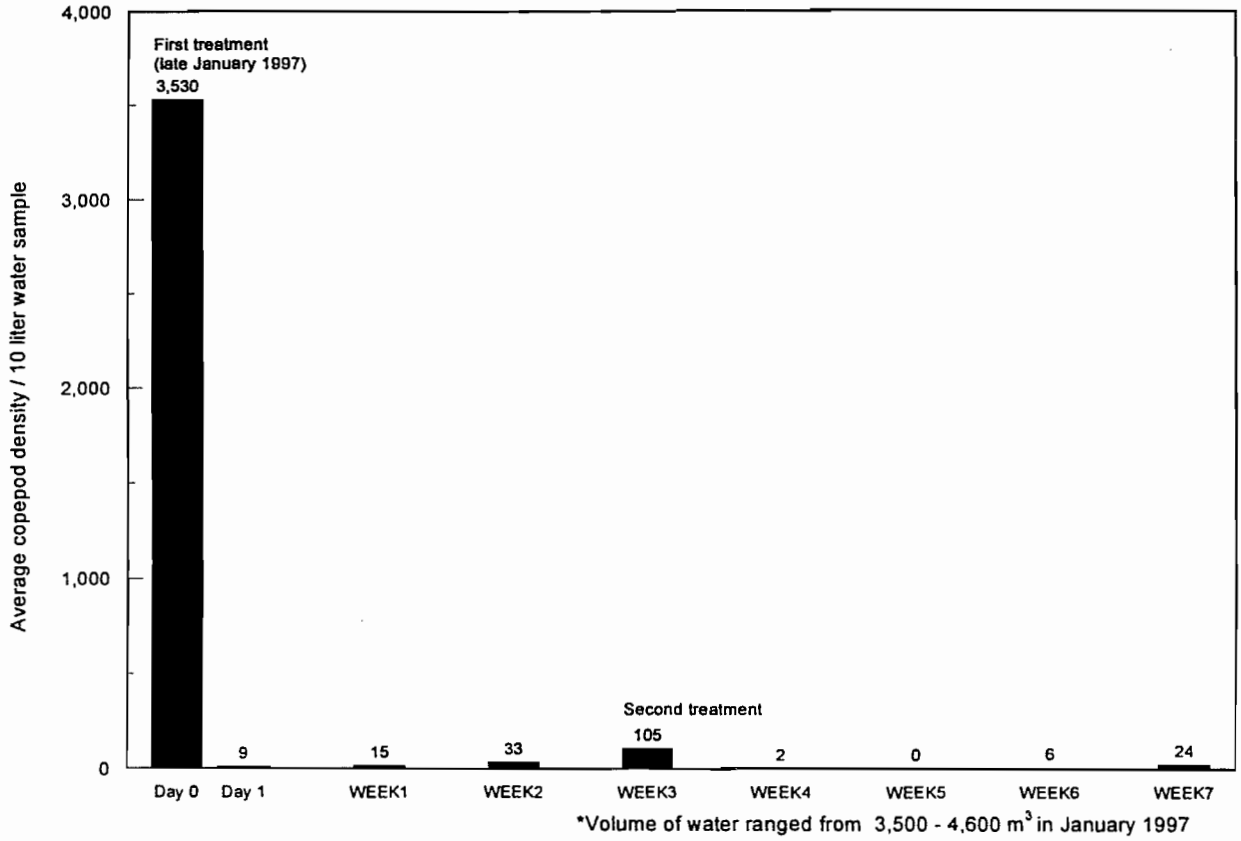


Figure 5

IMPACT OF ABATE USAGE ON AVERAGE COPEPOD DENSITIES IN THREE DAMS* SERVING THE TOWNS OF SAVELUGU, KARAGA, AND GUSHEGU, GHANA
(These three towns reported 50% of all cases in the Northern Region in the first half of 1997)



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Inclusion of information in the Guinea Worm Wrap-Up does not constitute "publication' of that information.
In memory of BOB KAISER.

For information about the GW Wrap-Up, contact Trenton K. Ruebush, MD, Director, WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCID, Centers for Disease Control and Prevention, F-22, 4770 Buford Highway, NE, Atlanta, GA 30341-3724, U.S.A. FAX: (770) 488-4532.

CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.