



Date: March 15, 1999

From:



WHO Collaborating Center for
Research, Training and Eradication of Dracunculiasis

Subject:

GUINEA WORM WRAP-UP #88

To: Addressees

Detect Every Case, Contain Every Worm!

1998: 12 % FEWER CASES, 16% FEWER ENDEMIC VILLAGES OUTSIDE SUDAN

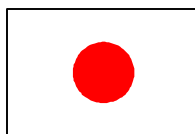
This issue summarizes the nearly complete surveillance numbers from 1998. As indicated in the enclosed Tables and Figures, in 1998 endemic countries outside of Sudan reduced their number of reported cases to 30,449 (-12%), while reducing the number of endemic villages (reported one or more case(s) of dracunculiasis during 1998) by -16%, to 3,160. Thus, only a little more than 30,000 cases of dracunculiasis were reported outside of Sudan. Outside of Sudan and Nigeria, the number of cases was reduced by -22%. Meanwhile, the number of documented cases imported/exported from one country to another increased significantly since 1997, when only 124 international importations were reported, as compared to 256 such importations in 1998. Other important achievements are that Cameroon, Senegal and Yemen reported no indigenous cases for the first full calendar year in 1998, and Chad reported only 2 confirmed cases, while Ethiopia and Mali recorded their first months with zero cases reported since their eradication programs began. The discovery and beginning correction of serious problems in the program in Southeast Nigeria late in the year, and increased funding, give reason to expect that Nigeria will resume reducing its cases later in 1999, as Ghana already did in 1998. All countries except Sudan, as well as the ten northern states of Sudan, are now aiming to interrupt transmission of dracunculiasis in 1999 or 2000.



DENMARK PROVIDES \$1.5 MILLION

The Government of Denmark recently informed The Carter Center of its decision to provide approximately US\$ 1.5 million (9.5 million Danish kroner) for the eradication program over the period 1999 – 2001. The funds will be used to support eradication activities in the remaining endemic countries in West and East Africa. This follows and expands on funding provided by Denmark last year to support the Guinea Worm Eradication Program in Niger.

JAPANESE GRANT FOR NIGERIA; GENERAL GOWON VISITS EBONYI STATE



In follow-up to its earlier pledge to The Carter Center that it would provide \$2.5 million for the Guinea Worm Eradication Program, the Government of Japan recently awarded four grants totaling approximately \$305,000 for the four operational zones of the Nigerian Guinea Worm Eradication Program (NIGEP). The grants were presented by the Ambassador of Japan, Mr. Takahisa Sasaki, in a ceremony held at the Japanese Embassy in Lagos, Nigeria on March 10. Dr. Emmanuel S. Miri, country representative of Global 2000 in Nigeria, accepted the grants, which are a part of

Japan's Grant Assistance for Grassroots Projects (GGP, formerly Small Scale Grant Assistance), on behalf of The Carter Center. The grants will be used mainly to purchase one four wheel drive vehicle, 67 motorbikes, 340 bicycles, 950 first aid kits for case containment, and for sewing 100,000 nylon filters. Last year, the Government of Japan donated 150 hand pumps for wells in Niger, Enugu and Ebonyi States.

General Dr. Yakubu Gowon visited authorities in Ebonyi State on March 11. This was his first such visit to an endemic area on behalf of NIGEP. After a courtesy call on the military administrator of Ebonyi State, General Gowon and his entourage visited Ugbodo village in Ebonyi Local Government Area, which is the highest endemic village in the state. They later inspected a hand dug well constructed by the village Task Force members during a visit to Enyibuchiri village. Among those accompanying General Gowon were the chairman of the NIGEP Task Force of Ebonyi State, Mr. John O. Nkwda; NIGEP Southeast Zonal Facilitator, Prof. Eka I. Braide; and Mr. Craig Withers from Global 2000 headquarters.

UNICEF EXECUTIVE DIRECTOR PROVIDES FUNDS FOR CHILD HEALTH PRIORITIES DURING 1999



In a recent announcement UNICEF headquarters announced that over \$ 21 million of its own resources has been provided this year to a number of countries for priority programs such as immunizations, HIV/AIDS, and malaria, including \$ 1.1 million for dracunculiasis eradication. Countries with endemic dracunculiasis that will receive funds and the amounts awarded are Benin (\$200,000), Chad (\$ 200,000), Cote d'Ivoire (\$ 200,000), Mali (\$ 200,000), and Niger (\$ 100,000). Additionally, Central African Republic and Yemen will each receive \$ 100,000.

ROLES OF REWARDS IN DRACUNCULIASIS ERADICATION

Eradication programs require that all cases of the disease be detected so that transmission can be effectively interrupted. Cash rewards can greatly strengthen case detection and help induce patients to comply with the containment of transmission. However, rewards will not be effective unless they are widely advertised, well understood, and valued by the population. The chronology, modalities and uses of cash rewards during the dracunculiasis eradication campaign are described in Table 1. So far, there has been no indication of misuse of monies in any of the countries using cash rewards or of any other major untoward effects of such rewards. The most significant negative experience so far has been that of Cameroon, where its reward of about US \$40 per case in 1997 appears to may have stimulated a number of cases from Bama LGA, Nigeria to seek treatment in Cameroon. A rule now in place in a number of countries is that of detecting and immediately containing cases that may be imported from neighboring countries, but disqualifying them from obtaining the cash reward.

Meetings

The delayed annual Program Review for remaining endemic francophone countries will be held in Dakar, Senegal on April 6 – 9, 1999.

Table 1

CHRONOLOGY, MODALITIES, AND PURPOSE OF REWARDS IMPLEMENTED BY GUINEA WORM ERADICATION PROGRAMS

Date	Country	Modality of Rewards	Purpose	Comments
1991	Pakistan	1,000 Rupees (about US \$50) to person (informant) reporting the first case of GWD in any village and the same amount to the health worker who first reports the case the GWEP.	To detect villages with endemic disease.	Reported 160 cases in 1990
1992	Pakistan	Extends rewards to each case, and reward increased to 2,000 Rupees (about US \$100) for each patient who complied with case containment.	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 106 cases in 1991
1993	Pakistan	Increases reward to 3,000 Rupees (about US \$150)	To enhance the sensitivity of surveillance and effectiveness of case containment.	Reported 23 cases in 1992
1993	Cameroon	Offers 1,000 CFA (about US \$4) per case, plus 500 CFA to the village-based health worker or informer.	To enhance the sensitivity of the surveillance system.	Reported 127 cases in 1992
1994	Yemen	Offers 2,000 Rials (about US \$ 18) award divided between the patient, informant and cost of transport.	To confirm if cases exist and identify endemic villages	National case search
1995	Cameroon	Increases rewards to CFA 7,500 (about US \$ 14)	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 30 cases in 1994
1995	India	Offers 500-1,000 (about US \$ 15-30) Rupees to first informer of a new case and compensates patient for "lost wages" during stay at health unit to extract the worm(s) manually.	To enhance the sensitivity of surveillance and effectiveness of case containment.	Reported 371 cases in 1994
1996	Pakistan	Prime Minister of Pakistan announces reward of 30,000 Rupees (about US \$850) for reporting of a case.	To confirm absence of cases and transmission	3 years after the last known indigenous case was reported.
1996	Ethiopia	Offers 59 Birr (about US \$ 8) each to the case and to the informant.	To enhance the sensitivity of surveillance.	Reported 514 cases in 1995
1996	Yemen	Increases reward to 6,000 Rials (about US \$ 50).	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 82 cases in 1995
1997	Ghana	Offers 2,000 Cedis (about US \$ 1.17 for reporting of case with pre-emergent Guinea worm.	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 4,877 cases in 1996
1997	Chad	Offers reward of 5,000 CFA (about US \$ 9) per case.	Enhance the sensitivity of surveillance	Reported 127 cases in 1996
1997	Uganda	Offers reward 10,000 Ug.Shillings (about US \$ 7) each to the patient and informer, and 4,000 Ug.Shillings to the village health workers in Kitgum and at-risk Districts.	To enhance the sensitivity of surveillance	Reported 1455 cases in 1996
1997	Cameroon	Raises rewards to CFA 22,000 (about US \$40)	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 8 indigenous cases in 1996. Reward amount attracts cases from Nigeria.
1998	Ghana	Increases rewards for reporting cases to 5,000 Cedis (about US \$ 2.12) to each person allowing the worm to be contained by either surgical or manual extraction; 5,000 Cedis to the surgical extractor for every worm extracted during the pre-emergent stage; 2,000 Cedis (About US \$ 0.85) to the case manager for every case contained by bandaging (worm already emerged); 2,000 Cedis to the informant for every case identified; 5,000 Cedis for every new endemic village identified; and reimbursement of transportation costs to the patient.	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 8,921 cases in 1997
1999	Uganda	Plans to expands rewards to cover Kotido and Moroto Districts in July.	To enhance sensitivity of surveillance and effectiveness of case containment.	Reported 1,061 cases in 1998
1999	Yemen	Plans to Increase reward to 20,000 Rials (about US \$ 140) beginning in April.	To enhance sensitivity of surveillance and help verify if transmission persists.	Reported 0 cases in 1998
1999	Ethiopia	Offers blankets to patients in addition to cash reward.	To induce patients with emergent worms to remain under observation until removal of worm(s).	Reported 365 cases in 1998

Table 2

Number of cases contained and number reported by month during 1998*
(Countries arranged in descending order of cases in 1997)

COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*		
SUDAN	465 / 1328	869 / 1280	889 / 1524	1618 / 2627	2135 / 3485	3580 / 6058	3433 / 7432	3374 / 5820	4252 / 6836	2844 / 6078	1736 / 3787	1003 / 1634	26198 / 47889	55	
NIGERIA	1544 / 1549	1188 / 1259	1199 / 1279	854 / 955	952 / 1234	953 / 1484	954 / 1395	800 / 1197	412 / 659	481 / 907	348 / 738	499 / 764	10184 / 13420	76	
GHANA **	870 / 1278	535 / 709	478 / 554	276 / 382	208 / 263	169 / 226	132 / 178	40 / 58	53 / 67	191 / 214	620 / 710	608 / 834	4180 / 5473	76	
NIGER	7 / 11	4 / 4	5 / 5	42 / 43	129 / 168	277 / 367	411 / 687	378 / 575	315 / 468	153 / 237	71 / 116	11 / 19	1803 / 2700	67	
BURKINA FASO	1 / 1	1 / 6	1 / 17	12 / 160	122 / 295	78 / 514	147 / 752	71 / 212	91 / 299	37 / 59	7 / 8	0 / 11	568 / 2334	24	
TOGO	84 / 277	22 / 109	40 / 87	36 / 49	34 / 47	63 / 83	71 / 130	80 / 131	104 / 255	160 / 345	184 / 407	124 / 203	1002 / 2123	47	
UGANDA ***	7 / 8	3 / 6	24 / 43	164 / 226	209 / 300	154 / 176	116 / 128	58 / 71	45 / 48	31 / 33	10 / 10	12 / 12	833 / 1061	79	
COTE D'IVOIRE	151 / 251	110 / 138	115 / 184	65 / 195	110 / 158	96 / 121	32 / 40	24 / 39	10 / 53	33 / 34	12 / 13	7 / 10	765 / 1236	62	
MALI	9 / 10	2 / 5	0 / 0	18 / 24	4 / 8	21 / 63	41 / 94	93 / 149	76 / 101	41 / 95	31 / 57	7 / 27	343 / 633	54	
BENIN	92 / 103	22 / 37	10 / 10	29 / 30	25 / 26	10 / 10	7 / 7	10 / 10	25 / 41	100 / 105	197 / 212	95 / 104	622 / 695	89	
ETHIOPIA	1 / 1	6 / 6	10 / 11	58 / 60	70 / 73	87 / 89	79 / 84	28 / 28	7 / 7	2 / 2	0 / 0	4 / 4	352 / 365	96	
MAURITANIA	0 / 0	0 / 0	0 / 0	3 / 4	0 / 0	1 / 2	30 / 44	56 / 127	44 / 91	37 / 93	13 / 15	3 / 3	187 / 379	49	
CHAD	0 / 0	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	100	
YEMEN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	-	
SENEGAL	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	-	
CAMEROON ¹	0 / 0	0 / 0	0 / 0	0 / 0	1 / 2	4 / 4	8 / 8	5 / 5	2 / 2	0 / 0	0 / 0	0 / 0	20 / 21	95	
KENYA ²	/	/	/	/	/	3 / 3	3 / 3	1 / 1	/	/	/	/	7 / 7	100	
TOTAL*	3231 / 4817	2764 / 3561	2771 / 3714	3175 / 4755	3999 / 6059	5496 / 9200	5464 / 10982	5018 / 8423	5436 / 8927	4110 / 8202	3229 / 6073	2373 / 3625	47066 / 78338	60	
% CONTAINED	67	78	75	67	66	60	50	60	61	50	53	65	60		

* PROVISIONAL

¹ All cases reported during 1998 were imported from Nigeria.² All cases reported during 1998 were imported from Sudan.

Table 3

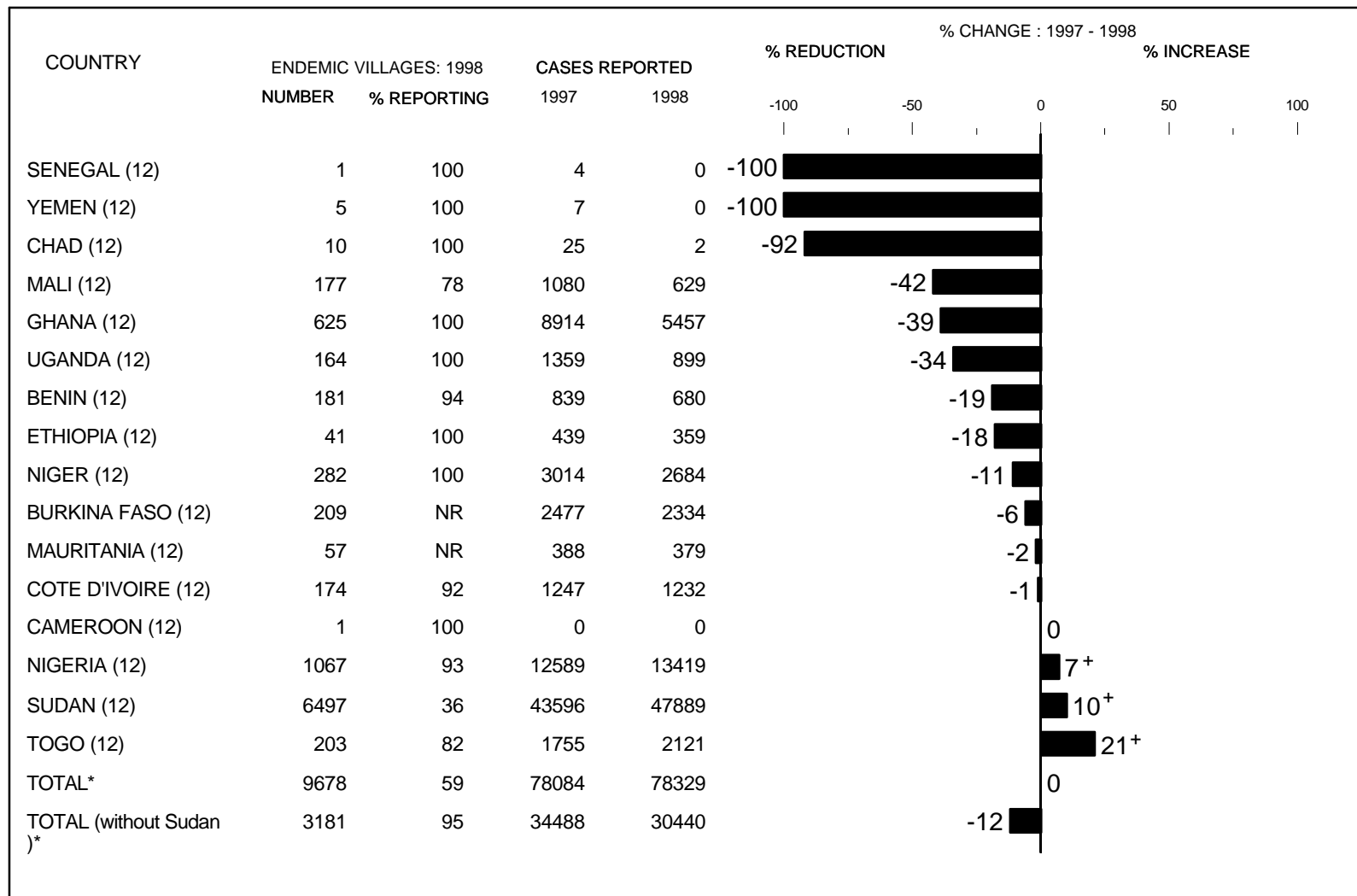
Number of cases contained and number reported by month during 1999*
(Countries arranged in descending order of cases in 1998)

COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SUDAN	/	/	/	/	/	/	/	/	/	/	/	/	0 / 0	
NIGERIA	596 / 1358	752 / 1432	/	/	/	/	/	/	/	/	/	/	1348 / 2790	48
GHANA	489 / 1142	/	/	/	/	/	/	/	/	/	/	/	489 / 1142	43
NIGER	2 / 2	3 / 3	/	/	/	/	/	/	/	/	/	/	5 / 5	100
BURKINA FASO	/	/	/	/	/	/	/	/	/	/	/	/	0 / 0	
TOGO	92 / 107	/	/	/	/	/	/	/	/	/	/	/	92 / 107	86
COTE D'IVOIRE	42 / 42	/	/	/	/	/	/	/	/	/	/	/	42 / 42	100
UGANDA	3 / 6	7 / 7	/	/	/	/	/	/	/	/	/	/	10 / 13	77
BENIN	85 / 89	/	/	/	/	/	/	/	/	/	/	/	85 / 89	96
MALI	2 / 2	/	/	/	/	/	/	/	/	/	/	/	2 / 2	100
MAURITANIA	/	/	/	/	/	/	/	/	/	/	/	/	0 / 0	
ETHIOPIA	0 / 0	/	/	/	/	/	/	/	/	/	/	/	0 / 0	
CHAD	/	/	/	/	/	/	/	/	/	/	/	/	0 / 0	
TOTAL*	1311 / 2748	762 / 1442	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2073 / 4190	49
% CONTAINED	48	53											49	

* PROVISIONAL

Figure 1

**PERCENTAGE OF ENDEMIC VILLAGES REPORTING
AND PERCENTAGE CHANGE IN NUMBER OF INDIGENOUS CASES OF DRACUNCULIASIS
DURING 1997 AND 1998 *, BY COUNTRY**



* Provisional. Totals do not include imported cases.

(8) Denotes number of months for which reports were received, e.g., Jan. - Aug., 1998

NR Countries with unknown or low rate of reporting.

Figure 2

Distribution by Country of 78,338* Cases of Dracunculiasis Reported During 1998**

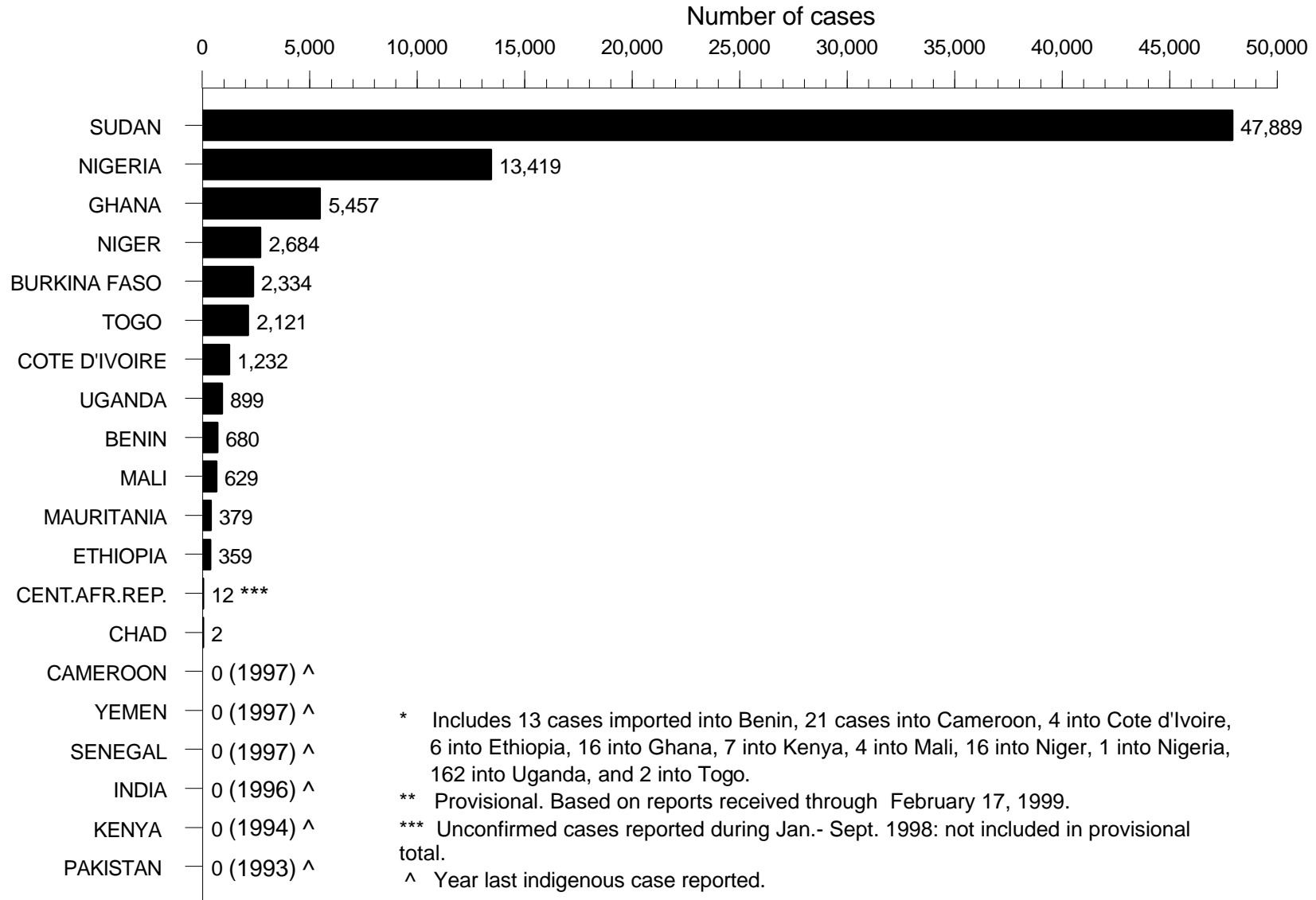


Figure 3

GUINEA WORM RACE!

WHO WILL JOIN THE WINNERS IN 1999?

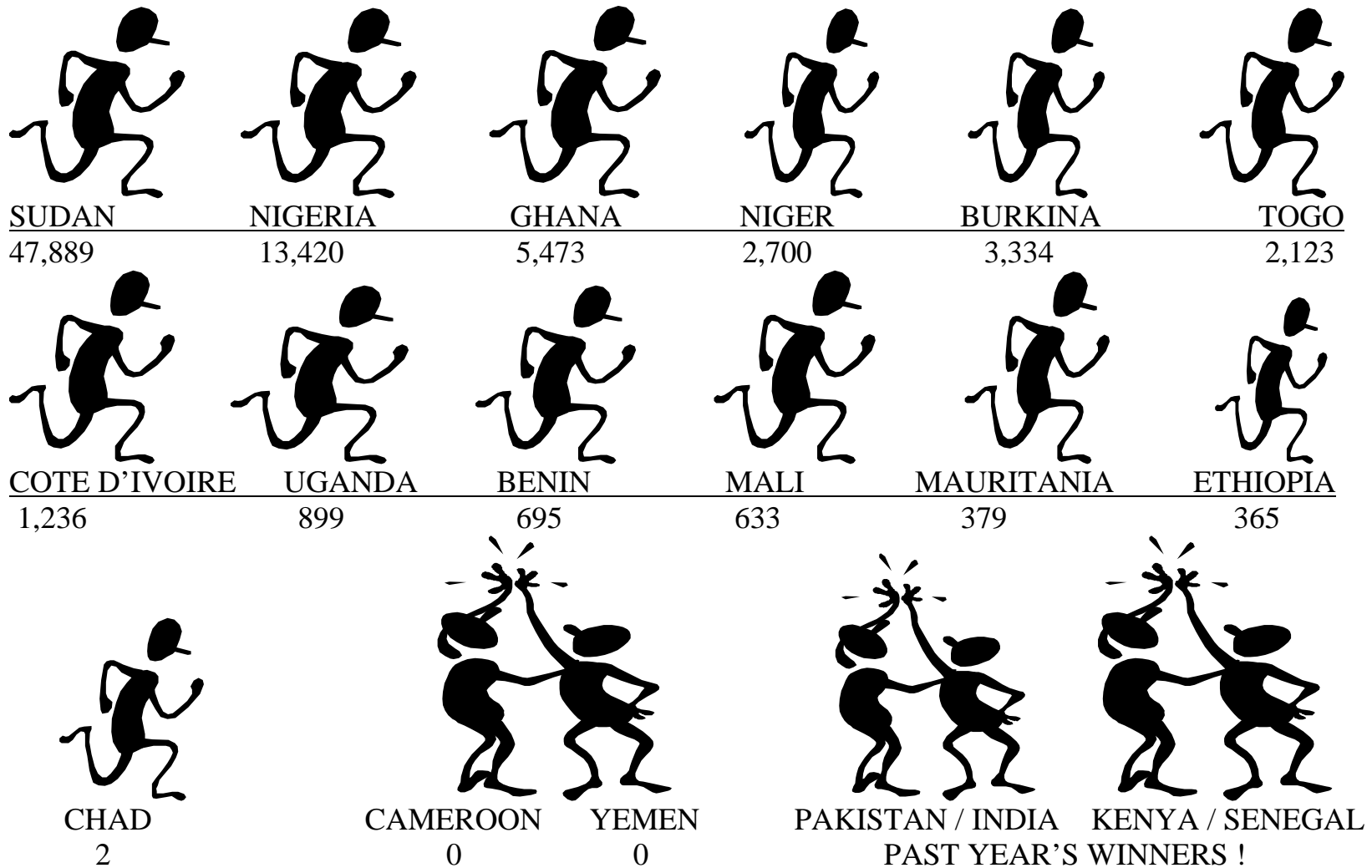
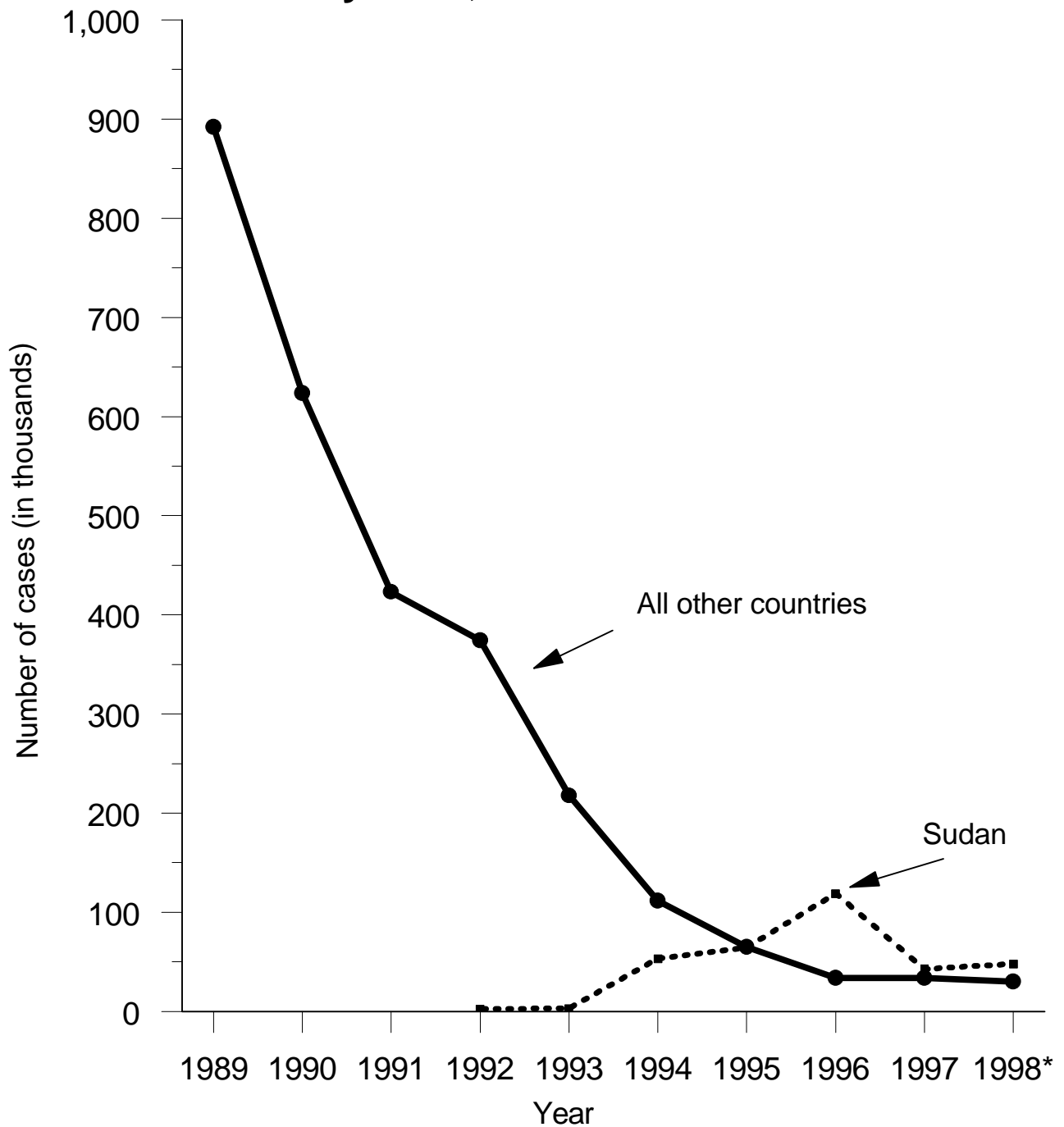


Figure 4

Number of Reported Cases of Dracunculiasis, by Year, 1989 - 1998*



* Provisional - bases on reports received through March 11, 1998

Table 4

Dracunculiasis Eradication Campaign
Reported Importations of Cases of Dracunculiasis: 1998

From	To	Cases				
		Month	Number	Contained	Notified*	
Benin	Niger	July	1	0	1	
Burkina Faso	Niger	January	1	1	1	
		June	2	1	2	
		July	3	0	3	
		September	1	1	1	
	Mali	July	1	?	?	
		September	2	?	?	
		November	1	?	?	
	Côte d'Ivoire	June	1	1	1	
		July	1	0	1	
		August	1	1	1	
Côte d'Ivoire	Togo	February	1	?	1	
Ghana	Benin	January	4	4	4	
		May	1	1	1	
		June	1	1	1	
	Togo	June	1	?	1	
Mali	Niger	November	1	1	1	
Niger	Nigeria	August	1	?	1	
	Ghana	October	1	?	?	
	November	1	0	1		
Nigeria	Cameroon	May	2	2	2	
		June	4	4	4	
		July	8	8	8	
		August	5	5	5	
		September	2	2	2	
	Benin	January	1	1	?	
		April	1	1	1	
	Niger	February	2	2	1	
		April	1	1	1	
		May	1	?	1	
		July	1	?	1	
		August	1	?	1	
		September	1	?	1	
		October	1	?	1	
	Sudan	Ethiopia	May	2	2	?
			June	3	3	?
July			1	1	1	
Kenya		June	3	3	?	
		July	3	3	?	
		August	1	1	?	
Sudan	Uganda	March	5	5	5	
		April	13	2	13	
		May	49	17	49	
		June	41	41	41	
		July	45	45	45	
		August	7	2	7	
		September	1	1	1	
		December	1	1	1	
		Togo	Benin	January	1	1
March	1			1	1	
April	1			1	1	
May	1			1	?	
July	1			1	1	
October	2			2	2	
November	1			1	1	
December	2			?	2	
Ghana	May		1	1	?	
	June		11	11	?	
	November		1	1	1	
Total			256	186	224	

* Notified to country of origin through WHO.

Table 5

**NUMBER OF ENDEMIC VILLAGES BY COUNTRY
AND % CHANGE DURING 1998**

Country	Number of endemic villages		% Change
	as of 1/1/1998	as of 1/1/1999*	
Yemen	5	0	-100
Senegal	1	0	-100
Cameroon	1	0	-100
Chad	10	1	-90
Uganda	244	164	-33
Mauritania	83	57	-31
Mali	269	177	-34
Niger	396	282	-29
Ghana	843	625	-26
Benin	212	181	-15
Ethiopia	45	41	-9
Nigeria	1136	1067	-6
Burkina Faso	211	209	-1
Togo	204	203	0
Sudan	5730	6497	13
Cote d'Ivoire	115	154	34
Total	9488	9559	1
Total without Sudan	3758	3160	-16

* Provisional

*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.

The GW Wrap-Up is also available on the web at http://www.cdc.gov/ncidod/dpd/list_drc.htm.



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