

Date: May 30, 2008

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

Subject: GUINEA WORM WRAP-UP #181

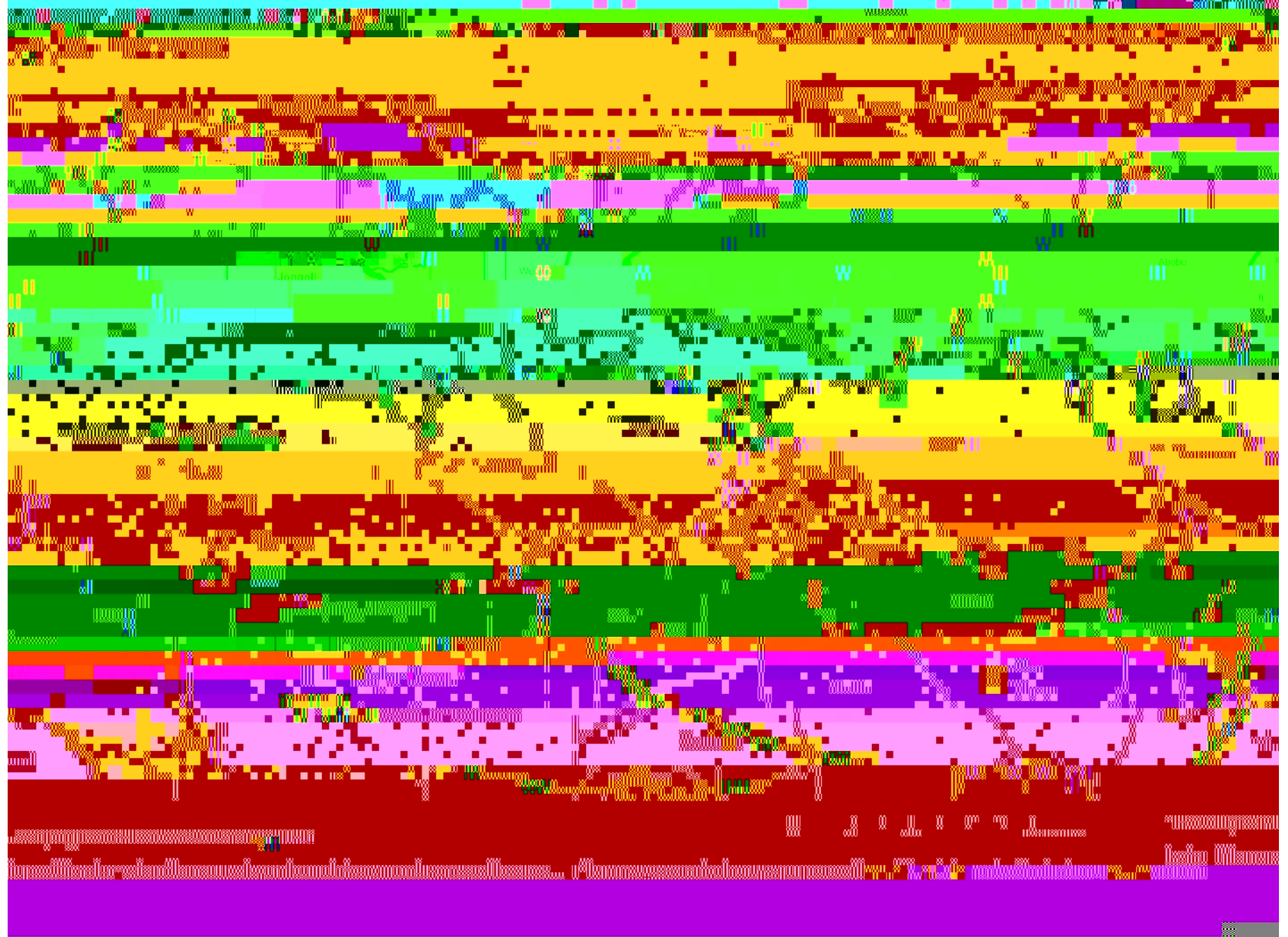
According to the EDEP, Gog Woreda has reported no cases of Guinea worm disease since 2006, when Ethiopia reported only one indigenous case in the entire country, a resident of Awukoy village, in Gog Woreda, who was detected and contained in Gambella Town in June. Ethiopia reported no indigenous cases of dracunculiasis in 2007, and only three imported cases (from Sudan into an area much further south), all of them reportedly contained, in June. Awukoy village was the home of all 13 indigenous cases reported in Ethiopia in 2003, and was the location or source of 21 of the 29 indigenous cases reported by Ethiopia in 2005 (April-August). The peak transmission season for dracunculiasis in Gambella Region has traditionally been April- August.

According to health officials in South Sudan, Pochalla County has never reported a case of dracunculiasis since Sudan's Guinea Worm Eradication Program began over a decade ago. Thus Pochalla County is one of the counties in South Sudan that has been presumed to be GW-free and has no formal surveillance for the disease, except for periodic questioning during Polio Immunization Days. The nearest known endemic area in South Sudan is just south of Pochalla County, in neighboring Pibor County (Figure 1), Pibor County reported 55 cases, none of them contained, in 31 endemic villages in January-June 2007. 50 of the 55 cases occurred in Kassingor Payam, which was the location of 3 villages with 5 or more cases each: Nawuyapurm (1 case in February, 3 in March, 2 in April), Kanamuge (3 cases in March, 3 in May), and Nakaluwat (5 cases in April), with a reporting rate of 41 %.

People of the Agnuak ethnic group, who are mostly farmers, live on both sides of the international border, in Pochalla County of Sudan and Gog Woreda of Ethiopia, and many Agnuak move across the border frequently, in both directions, to visit relatives, trade, work, and flee insecurity. Pochalla County was a contested area during Sudan's long civil war, and many Sudanese refugees returned to South Sudan from the refugee camp at Pugnido, Ethiopia after the Comprehensive Peace Agreement was signed in January 2005. Clashes between Agnuak and Nuer hampered activities by the EDEP in Gog Woreda in the latter months of 2006 and sporadic insecurity from various causes has been a serious problem in the district for many years. Agnuaks in Pochalla are also known to visit areas of Pibor County, especially at the peak of the dry season in February-March, and according to Ethiopian authorities, members of another ethnic group in Pibor, the Murle, travel "frequently" to Gog Woreda to raid cattle.

*Editorial Note: With a common ethnic group, sporadic insecurity, conditions well suited for dracunculiasis transmission on both sides of the international border, and frequent cross-border travel in both directions, it may never be possible to be certain about the source of each of these infections. There may have been multiple sources, potentially in either or both countries, although there are currently more opportunities for transmission of dracunculiasis in South Sudan, where dracunculiasis transmission typically begins earlier in the year and lasts longer than in Ethiopia. What is most important now, however, is to detect and contain any additional cases as soon as the worm appears, establish adequate surveillance in Gog Woreda and Pochalla County, and prevent re-establishment of endemic transmission in Gambella Region. Health authorities in Ethiopia and South Sudan are urged to focus on developing adequate surveillance in the affected areas and sharing relevant information quickly. The EDEP also needs to mobilize regional and national health and political authorities in Ethiopia, as well as its international partners, in order to address the serious epidemiological and security issues highlighted by this episode.*

# Border Region of 2011



*Every experienced viewer of horror movies knows that one should never go back to see or poke at the monster or villain to make sure it is dead. In real life, our job as Dragon Slayers is exactly the opposite. We must always check to make sure the “little dragons” (Guinea worms) are dead and that they don’t reappear when we least expect it. DRH*

## **GHANA: CONTINUED REDUCTIONS, RESIDUAL CHALLENGES**

Ghana has reported 69 cases in April 2008, which is a reduction of -76% from the 293 cases reported in April 2007, and continues the Ghana GWEP’s recovery that began to be manifested in April 2007 (Figure 2). Ghana’s reductions in cases for January-April 2008 is an impressive – 89% (271 vs 2,508 cases). At least 77% of the cases in 2008 so far have been contained, with several cases still pending containment. Fully 30% of the cases reported through April have been contained in case containment centers (CCC), versus 17% of cases contained in CCCs in all of 2007. Twenty-six villages were endemic in January – March, while 42 villages reported only imported cases in the same period (Burkina Faso also reported one case imported from Ghana in April). Through April, there were no known endemic villages outside of the Northern Region in 2008. 54% of cases this year are in children 15 years old or younger. As of the end of March, all endemic villages have received health education, 96% had received pipe filters since January 2007, 70% had cloth filters in all households, 48% had water sources treated with ABATE® Larvicide, and 45% had at least one source of safe drinking water.

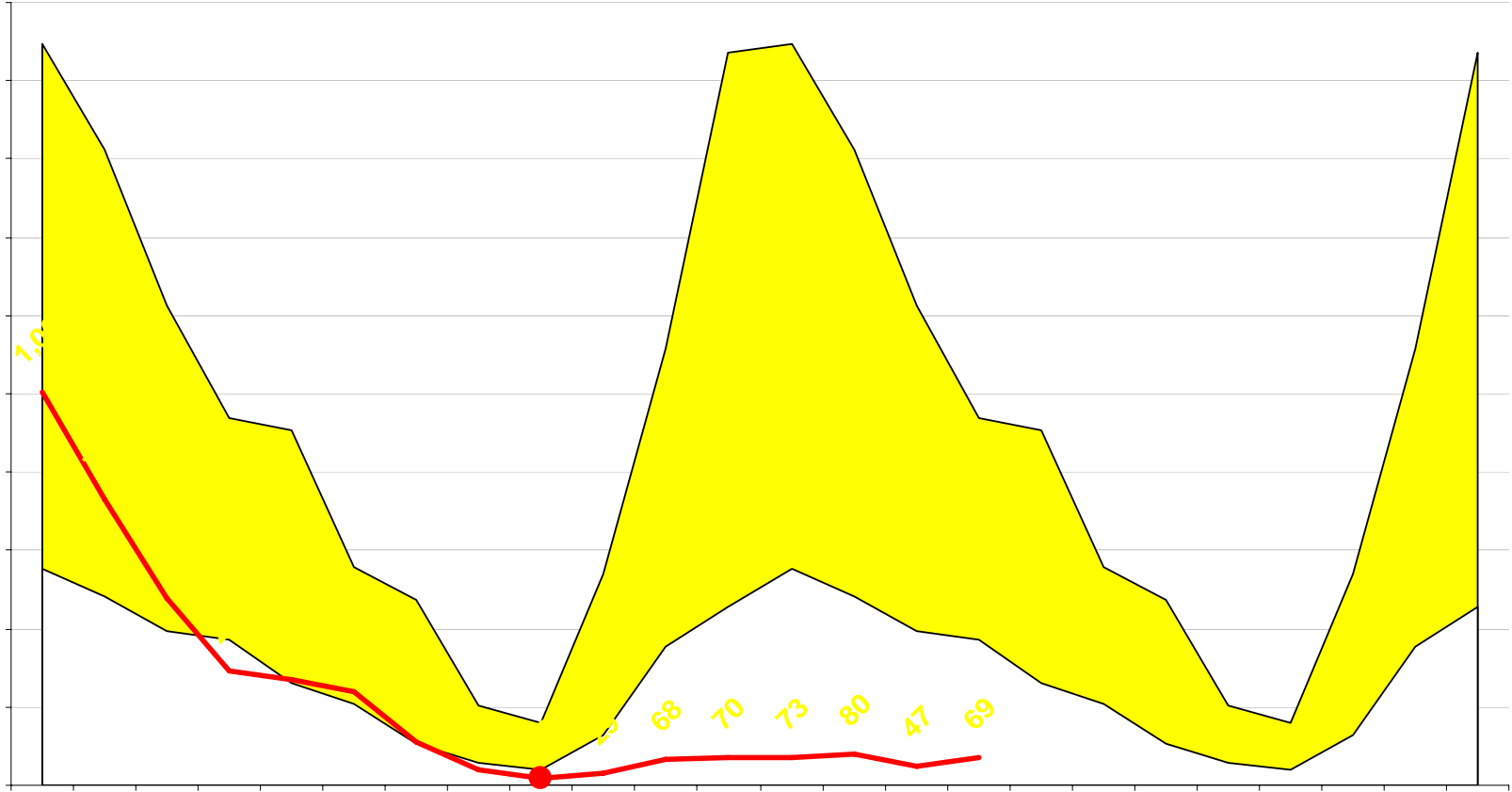
Small, but significant recent outbreaks in Yong village (15 cases) of Tamale District and in Sankpala (13) and Fulfoso (7) villages of Central Gonja District, however, point to pockets of residual weaknesses in supervision, surveillance and interventions that must be corrected in order to stop all transmission by 2009. Another dangerous on-going vulnerability is in the vast unguarded Guinea worm-free areas of the country. The program is refining its health education to focus on materials in Dagbani, and on methods for reaching children, both in and out of school. The next annual Program Review will be held in Tamale July 23-24.

*“Learn from past cases, manage the present cases, and prepare for future cases.” Phil Downs*

## **IN BRIEF**

**Mali** reported one case of dracunculiasis, in Gao District, in April. This case, which was contained, was traced to a nearby site that registered 16 cases, only four of which were contained, in 2007. Mali’s main transmission season is July-December. The program plans to use medical students to help intensify supervision in problem areas this year, and will emphasize hospitalization of cases that do occur. Unfortunately, increasing insecurity has resumed as a major problem in eastern Mali, where all missions to some endemic areas in Kidal, Ansongo, Gourma Rharous and Gao Districts have been suspended by the government recently, although the program has trained and supplied indigenous health workers in most of the areas of concern already.

**Sudan** has reported 361 cases in January – April 2008, with 74% of villages reporting. This is a reduction of 66% from the 1,049 cases that were reported during the same period of 2007 (Figure 3). Recent armed conflicts in Abyei and in northern Jonglei State are a great cause of concern.







## **GENERAL GOWON VISITS ENUGU STATE, INAUGURATES WELLS**

Former Nigerian Head of State General (Dr.) Yakubu Gowon made an advocacy and mobilization visit to Enugu State on April 28, accompanied by representatives of the Nigerian Federal Ministry of Health, The Carter Center, WHO, UNICEF and Sahara Energy Resources. The team paid courtesy



Table 1

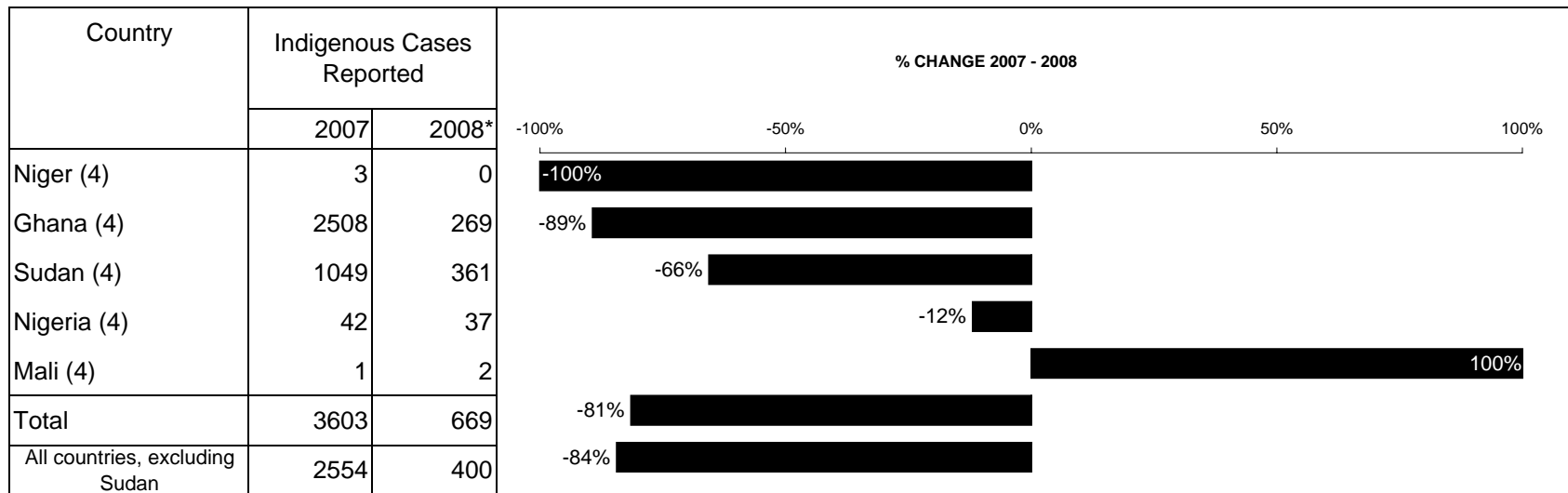
**Number of Cases Contained and Number Reported by Month during 2008\***  
(Countries arranged in descending order of cases in 2007)

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	4 / 31	7 / 32	22 / 81	44 / 217	/	/	/	/	/	/	/	/	77 / 361	
GHANA	67 / 73	64 / 80	39 / 47	47 / 69	/	/	/	/	/	/	/	/	217 / 269	81
MALI	1 / 1	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	/	/	2 / 2	100
NIGERIA	28 / 28	8 / 8	1 / 1	0 / 0	/	/	/	/	/	/	/	/	37 / 37	100
NIGER	0 / 0	1 / 1	0 / 0	0 / 0	/	/	/	/	/	/	/	/	1 / 1	100
ETHIOPIA	0 / 0	0 / 0	2 / 2	20 / 25	/	/	/	/	/	/	/	/	22 / 27	81
BURKINA FASO	0 / 0	0 / 0	0 / 0	1 / 1	/	/	/	/	/	/	/	/	1 / 1	100
TOTAL*	100 / 133	80 / 121	64 / 131	113 / 313	/	/	/	/	/	/	/	/	357 / 698	51
% CONTAINED	75	66	49	36									51	
% CONT. OUTSIDE SUDAN	94	82	84	72									83	

\* provisional

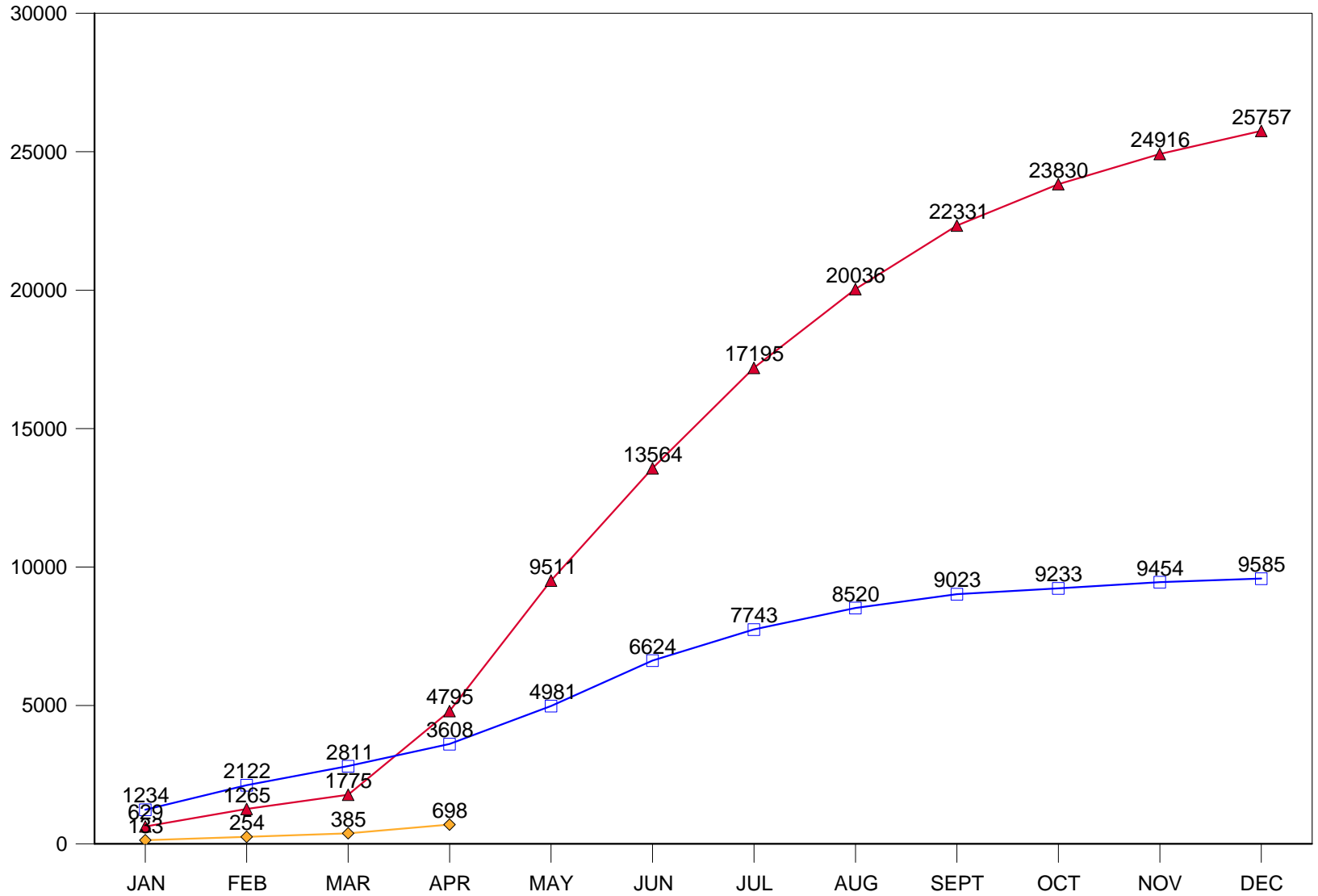
Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported and contained that month.

Figure 5  
 Number of Indigenous Cases Reported During the Specified Period in 2007 and 2008\*, and Percent Change in Cases Reported



\* Provisional: excludes cases exported from one country to another  
 (4) Indicates months for which reports were received, i.e., Jan.-Apr. 2008

Figure 6



trend the remaining endemic countries must detect every person with GWD and immediately act to stop transmission. Any lapses in the immediate detection of cases and in their containment will likely result in additional years of work to stop transmission. Hence, our very first statement in this issue about the provisional number of uncontained cases of dracunculiasis outside of Sudan so far in 2008: 60 in Ghana; 5 in Ethiopia, Zero in Mali, Nigeria, and Niger, as each uncontained case represents an opportunity for transmission of GWD to continue.

Table 2

**GWEP WORK FORCE: CATEGORY AND GENDER BY COUNTRY DURING 2007.**

Table 3 provides numbers by staff category and gender participating in the national GWEPs in Ghana, Mali, Nigeria, and Niger. All countries were asked to provide these data during the 8<sup>th</sup> African Conference on Dracunculiasis Eradication held in Abuja, Nigeria during April 2008. We hope that Sudan will provide similar figures for 2008.

Table 3

**Guinea Worm Eradication Campaign  
Guinea Worm Eradication Program staff: Ghana, Mali, Nigeria, and Niger by Category and Gender**

	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total	
Volunteers	10,114	9,818	697	152	747	28	261	100	11,819	10,098	21,917	98%
Supervisors	154	24	39	0	109	18	35	1	337	43	380	2%
Other	NA	NA	46	2	NA	NA	19	3	5	65	70	0%
Sub-Total	10,268	9,842	782	154	856	46	315	104	12,221	10,146	22,367	100%
Total	20,110		936		902		419		11,850		22,367	
% by Gender	51%	49%	84%	16%	95%	5%	75%	25%	55%	45%		94.075-49%

## **RECENT PUBLICATIONS**

Bristol N, 2008. Profile Donald R Hopkins: eradicating Guinea worm disease. The Lancet 371:1571 (May 10).

World Health Organization, 2008. Dracunculiasis er