

Elephant Partners

ElephantVoices Maasai Mara

Quarterly Report (2)

June 2013



Alfred Mepukori, a student at Maasai Mara University and an intern with ElephantVoices, walks the Naimina Enkiyo Forest in search of signs of elephants. Photo courtesy of Alfred Mepukori.

This 2013 second quarterly report is organized differently from our previous reports. Since much of what we write each quarter is an update on previous information, from now on we will keep our quarterly reports shorter and focus on updated information and assessments from the previous quarter. Where appropriate we will refer readers to the latest comprehensive report for detailed information and discussions - which for now is *ElephantVoices Mara Report Q1 2013*. The next comprehensive report will be the *End Year Report for 2013*.

All previous reports are available on <http://www.elephantvoices.org/mara-reports.html>. You can download *ElephantVoices Mara Report Q1 2013* report directly using [this link](#). You'll find a presentation of the project [here](#).

1. Elephant Partners - Background

Please see background information in *ElephantVoices Mara Report Q1 2013* which can be found [here](#).

2. The sightings

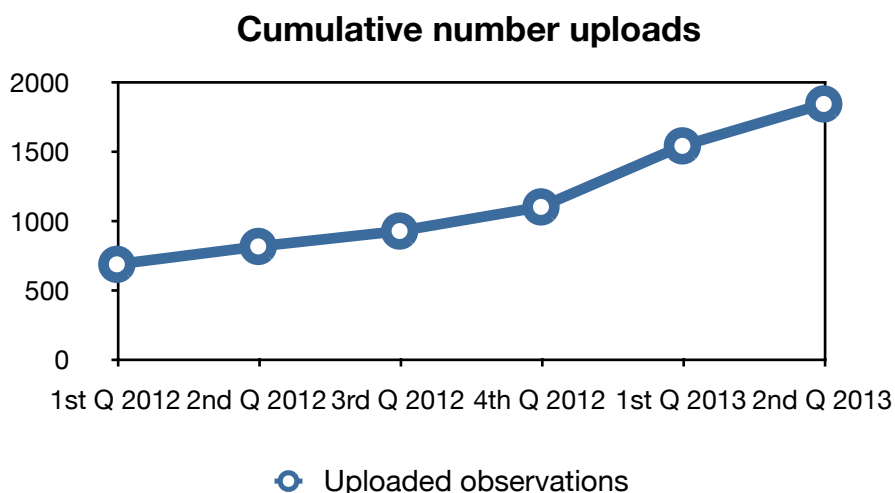
For a more detailed discussion of elephant sightings please see *ElephantVoices Mara Report Q1 2013* which can be found [here](#).

Information regarding how to use the [Mapping](#) function to access the sightings data can be found [here](#). As of 30 June 2013, 1,837 observations had been uploaded to the [Whereabouts Database](#) (Table 1). These "observations" consisted of lone males, bull groups of greater than one individual, family groups with or without associating males, groups of unknown type and mortalities. The rate of observations uploaded increased in the first quarter of 2013 (see Figure 1) likely due to the addition of two active participants, Alfred Kiprotich Bett, a ranger in Mara Conservancy, and Saitoti Silantoi, a Warden at Motorogi and Olare Orok Conservancies. It decreased slightly in the second quarter due, most likely, to the fact that we were not in the field.

Table 1. Number of observations as of 30 June 2013

Group type	Number of observations 2Q	Cumulative number of observations
Overall	298	1843
Single males	51	274
Bull groups > 1 individual	20	193
Family groups with or without associating males	168	1200
Unknown group type	27	56
Mortalities	9	47

Figure 1. Cumulative number of observations uploaded to the Mara Elephant Who's Who and Whereabouts



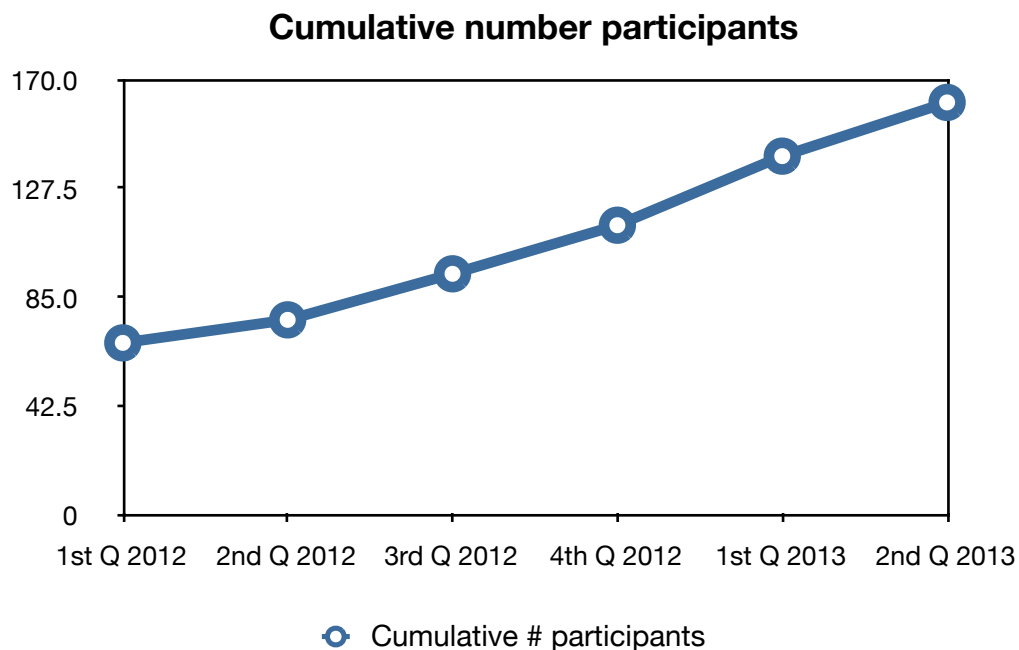
3. The participants

For a more detailed discussion of the participants please ElephantVoices Mara Report Q1 2013, which can be found [here](#).

The cumulative number of people who have participated in the collection of data continues to rise (Figure 2). A total of 29 different individuals contributed data to the online database during the second quarter 2013. These included Mara ecosystem residents (from Mara Conservancy to Naimina Enkiyo Forest; N=11), rangers (1), scouts (1), guides (2), student interns (1), KWS employees (1) Mara Elephant Project (2) and Elephant Aware (1), Conservancy Management (2) African Impact volunteers, other volunteers/tourists (18). Some individuals collected only a few observations, while others collected many. Some places are easier to observe elephants than others and in the Naimina Enkiyo Forest participants have resorted to collecting elephant signs as “observations”.

Alfred Kiprotich Bett, a ranger from Mara Conservancy and Saitoti Silantoi, a warden on Olare Orok and Motorogi, continue to upload observations regularly. In addition, Alfred Mepukori, a student at Maasai Mara University, joined us as an intern and has uploaded a significant number of observations from Naimina Enkiyo Forest. David Kimutai, of KWS is now stationed in the Maasai Mara as Research Scientist. He is carrying out his Masters field work in collaboration with us and is adding very useful information on elephants from across the National Reserve and the conservancies.

Figure 2. Cumulative number of participants to the Mara Elephants Who's Who and Whereabouts as of 30 June 2013



4. The elephants

a. Registration of elephants

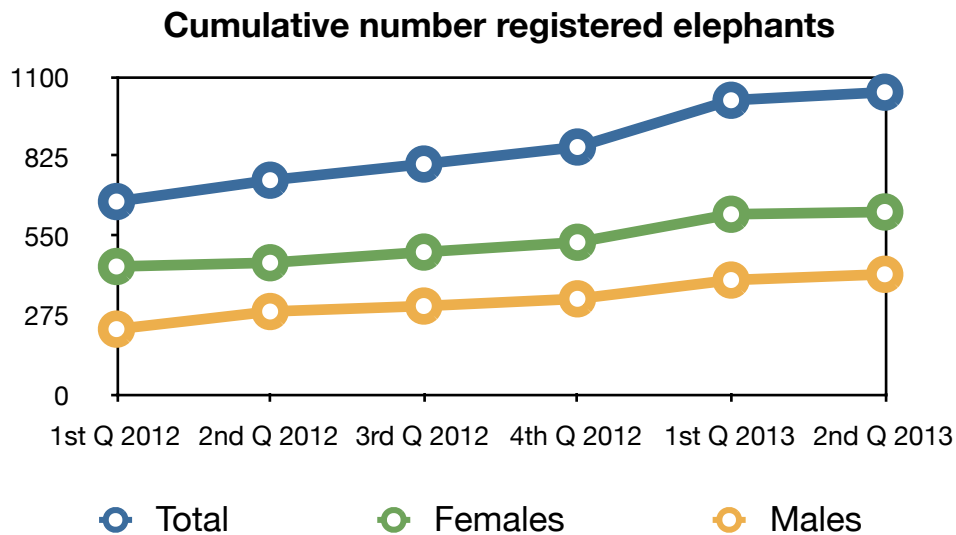
For a more detailed discussion of the registration of elephants, age structure and sex ratio of the population and conservation implications please ElephantVoices Mara Report Q1 2013, which can be found [here](#).

As of 30 June 2013 a total of 1,046 elephants had been identified, individually characterized, given an age estimation and been registered on the [Mara Elephants Who's Who Database](#). Of these 970 are adults over the age of 15 years of age of whom 59 % are adult females and 41 % are adult males (Table 2). The rate of new individuals slowed during the second quarter likely due to the fact that we were not in the field and so were relying on photographs uploaded to the database by others (Figure 3).

Table 2. Number of elephants individually recognized

	Registered online	Adults	%	<15 years
Total	1046	970	100	76
Male	415	401	41	14
Female	631	569	59	62

Figure 3. The cumulative number of registered elephants



b. The elephant population size

For a more detailed discussion of the Mara elephant population size and conservation implications please read the section on population size in ElephantVoices Mara Report Q1 2013, which can be found [here](#).

In our 1st quarter report we used “mark recapture” methodology to give a rough estimate of the Mara elephant population size as 3,765 elephants. Since we will be back in the field from October 2013 through March 2014 we will use the same technique to reestimate the population late this year or early next year.

At this point we want to reiterate that while this figure is well above the 3,000 estimated by KWS in 2010 **it does not represent an increase in the population over the last three years, but rather a better representation of the population size**. Our reason for stating this is: a) the number of calves per adult female does NOT indicate a rapidly growing population - it is lower than the number calculated for Amboseli in 2010 (Lee, pers. comm.) which represented a period of lower than normal births following the drought of 2009; b) the high mortality caused by poaching in 2011 and 2012 (see below) means that the population will have decreased rather than increased.

c. The number and distribution of group sightings

For a more detailed discussion of the number and distribution of elephant groups and conservation implications read ElephantVoices Mara Report Q1 2013 which can be found [here](#).

The distribution of elephant groups continues to follow a trend set early in the project. Family groups with or without associating males and lone males are found both inside the Maasai Mara National Reserve (MMNR) as well as in the conservancies and community owned land, while all-male groups are predominantly restricted to areas of higher browse biomass outside the MMNR. The distribution of sexually active lone males overlap with that of family groups.

d. The distribution of large groups

For a more detailed discussion of the distribution of large groups and conservation implications please read the section on large groups in ElephantVoices Mara Report Q1 2013, which can be found [here](#).

The location of aggregations of 50 or more elephants continues to be unevenly distributed across the ecosystem (Table 4) although the proportions are shifting somewhat as sample sizes increase. Very few large groups have so far been recorded in Mara North, Olare Orok, Maasai Mara NR Central (between Sekenani and Musiara) and Mara Conservancy, while a relatively high percentage of groups observed on Naboisho, Siana/Maji Moto and the South Eastern part of the National Reserve have been large (Table 4).

Table 4. Location of large groups accessed 29 July 2013

Location	No. groups >50	Total No. groups (excluding all-male)	% groups (excluding all male) >50 individuals
Overall	70	1254	5.6%
Mara North Conservancy	1	108	0.9%
Olare Orok Conservancy	1	131	0.8%
Maasai Mara NR Central	2	126	1.6%
Mara Conservancy	5	253	2.0%
Mara Naboisho Conservancy	29	435	6.7%
Maasai Mara NR SE & Olderkesi Cons	8	89	9%
Siana & Maji Moto Group Ranches	24	80	30%

e. Median group size

Using the export report function on the Mapping page we took a first look at the median sizes of family groups (with and without accompanying adult males) across the different areas (Table 5). Although we have yet to run any statistical analyses on these data, it appears that there are significant differences in group sizes between some of the areas. The MMNR, Olare Orok and Mara North Conservancies tend to have small groups, Mara Naboisho and Mara Conservancy medium-sized groups and Siana/Maji-Moto Group Ranches tend to have larger groups. As discussed in relation to the distribution of large groups in our earlier reports, these observations are likely to be related to a combination of level of security and habitat.

Table 5. Median family group

General Area	Median	Min	Lower Q	Upper Q	Max	N
Mara North Conservancy	7	1	4	12	100	109
Olare Orok	9	2	5	15	51	132
Maasai Mara NR	9	1	6	14.5	100	215
Mara Naboisho Conservancy	12	2	8	20	150	437
Mara Conservancy	13	2	9	20	80	253
Siana & Maji-Moto Group Ranches	32.5	6	20	61.25	335	80

f. Wounded elephants

For more detail on wounded elephants and conservation implications please read the section on wounded elephants in ElephantVoices Mara Report Q1 2013 which can be found [here](#).

Observers have made note of wounded individuals in some 89 (4.8%) of the 1,837 sightings of groups. Examining just our own (ElephantVoices) observations indicates that at least 11.1% of the groups we sighted (N=171) contained wounded individuals. We have long recommended that KWS station a permanent vet in the Mara and we are very pleased to learn KWS has now done so. By all accounts Dr. Limo is being kept very busy and doing good work. In addition, KWS has stationed David Kimutai in the Mara as research scientist. He is focusing on elephants in collaboration with us and is uploading very useful information.

g. Elephant mortality

For a more detailed report on mortality and conservation implications please read the section on elephant mortality in ElephantVoices Mara Report Q1 2013 which can be found [here](#).

In 2012, 149 geo-referenced elephant carcasses were reported in the Mara ecosystem. Of these 139 (PIKE 93%) were determined to have been illegally killed. The large majority of these were adult and male. During the same period, 25 mortalities of known sex were uploaded to Elephant Partners (included in the above figures) of which 19 (76%) were male and six (24%) were female.

During the first half of 2013 20 mortalities have been uploaded to the database. Of these 18 were illegally killed (PIKE 90%), one was a natural death (female) and one, of unknown sex, died of unknown causes. Of the 18 illegally killed 13 (72%) were male (10 adult and 3 sub-adult) and 5 (28%) were adult females.

It is of concern to note that the PIKE remains extremely high indicating that despite the excellent anti-poaching work carried out by the Mara Elephant Project in conjunction with the national and local authorities, the Mara elephants are continuing to undergo severe poaching pressure and are in decline. Of particular concern to us is the unrelenting and uncontrolled poaching that is taking place in the Naimina Enkiyo Forest. By all accounts this is being organized by a few individuals and every effort must be made to apprehend them. Currently the movement of elephants between the Mara and the forest is in immediate danger of being cut off due to poaching and unplanned settlement. The elimination of elephants in the forest and the cessation of movement of elephants to and from the forest will have enormous consequences for biodiversity of the Mara over the long-term.