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Text messages sent by roaming eagles bankrupt scientific study

By Jason Daley, Smithsonian, adapted by Newsela staff on 11.25.19

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Image 1. An endangered steppe eagle. Min, the steppe eagle who sent very expensive text messages through his GPS tracker, looks like this. Image courtesy of Pixabay

A team of Russian researchers set out to track endangered steppe eagles. They used a device that sends the birds' locations via text messages. They knew they would occasionally lose track of the birds when they flew into regions with little or no cellular coverage. Going off the grid isn't a huge deal. Usually, when that happens, the messages are sent once the eagles fly back into range. This works great as long as they stay in-network. With a solid cellular plan, the study should have been cost-effective.

But what they didn't plan for was Min. Min is a globe-trotting steppe eagle whose taste for adventure turned into a big international texting habit.

The Russian Raptor Research and Conservation Network team had equipped 13 steppe eagles with SMS text-based tracking devices. Four times a day, the devices would send the coordinates of the eagles. This was so researchers could figure out where they spend their time. However, the birds often spend most of the summer breeding season in regions with little or no cellular coverage,

mostly in Kazakhstan. Once they move on, the device sends dozens — or sometimes hundreds — of backlogged tracking messages all at once.

That's not a problem when the birds send messages on the Kazakh or Russian networks. But when Min reappeared in early October after being out of range, the eagle did so in Iran. Roaming rates there are sky-high.

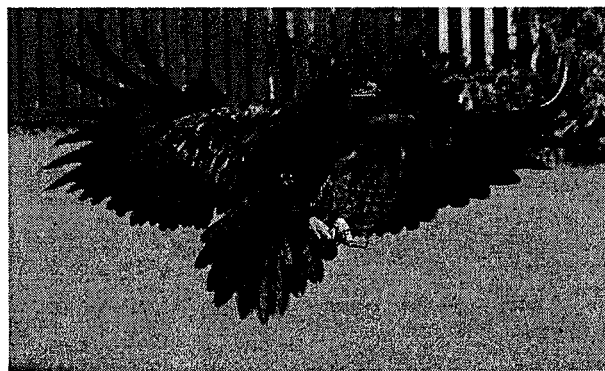
"He disappeared for five months, and all of a sudden here he is, with a very, very heavy phone bill," said Elena Shnayder. She is a scientist who works for the network.

Min sent hundreds of text messages at once at about 77 cents each. That price is five times the typical price on the Russian network. The texting alone wiped out the project's budget in one fell swoop. The budget had already taken a hit when other eagles took off to other places in Central Asia with high roaming charges.

According to the Siberian Times, another eagle named Khakas is hanging out near the border of Uzbekistan and Turkmenistan. One nation has reasonable

roaming charges and the other is quite expensive —

and Khakas was toeing that line. Other eagles have sent messages from expensive networks in Tajikistan and Pakistan.



According to a blog post, the research team raised about \$5,000 in crowdfunding. This will help cover the costs so they can continue tracking the eagles through the end of the year and into 2020. Peltier reports that the network used by the eagles' text-trackers, Megafon, announced that it would refund several months' worth of charges to the project. Megafon will also now offer special rates for the wayward eagles. In fact, Shnayder says other phone companies have reached out offering free SIM cards for any new eagles the project tracks now that the story has gone viral.

"It's quite an irony, because when we started the project and asked for discounts, many of them turned us down," she tells Peltier.

The steppe eagle needs all the help it can get. As Ryan F. Mandelbaum at Gizmodo points out, the massive eagle with a 7-foot wingspan spends its breeding season hunting the open deserts, steppes and savannas of Central Asia. It then disperses to southern Asia and parts of Africa for the winter. According to the IUCN, there are about 50,000 to 75,000 adult eagles remaining. However, they face many threats. Areas in their preferred habitat are being converted to agricultural use. Increases in wind turbines and power lines are also taking a toll on the species. Poachers and sport hunters also target the big eagles.

The steppe eagle is not the only raptor species facing problems. According to a recent study in the journal *Biological Conservation*, 18 percent of the world's 557 raptor species face extinction. Fifty-two percent have declining populations.

Quiz

1 Which sentence from the article shows the MAIN problem the Russian Raptor Research and Conservation Networks faced with their study?

- (A) They knew they would occasionally lose track of the birds when they flew into regions with little or no cellular coverage.
- (B) Once they move on, the device sends dozens — or sometimes hundreds — of backlogged tracking messages all at once.
- (C) The texting alone wiped out the project's budget in one fell swoop.
- (D) "It's quite an irony, because when we started the project and asked for discounts, many of them turned us down," she tells Peltier.

2 Read the conclusion below.

The steppe eagles study is receiving help from its current telephone company.

Which sentence from the article provides the BEST support to the statement above?

- (A) According to a blog post, the research team raised about \$5,000 in crowdfunding.
- (B) This will help cover the costs so they can continue tracking the eagles through the end of the year and into 2020.
- (C) Peltier reports that the network used by the eagles' text-trackers, Megafon, announced that it would refund several months' worth of charges to the project.
- (D) In fact, Shnyder says other phone companies have reached out offering free SIM cards for any new eagles the project tracks now that the story has gone viral.

3 Which sentence from the article would be MOST important to include in a summary of the article? _____

- (A) The Russian Raptor Research and Conservation Network team had equipped 13 steppe eagles with SMS text-based tracking devices.
- (B) According to the Siberian Times, another eagle named Khakas is hanging out near the border of Uzbekistan and Turkmenistan
- (C) As Ryan F. Mandelbaum at Gizmodo points out, the massive eagle with a 7-foot wingspan spends its breeding season hunting the open deserts, steppes and savannas of Central Asia.
- (D) According to a recent study in the journal Biological Conservation, 18 percent of the world's 557 raptor species face extinction.

4 Read the following detail from the article.

Areas in their preferred habitat are being converted to agricultural use. Increases in wind turbines and power lines are also taking a toll on the species. Poachers and sport hunters also target the big eagles.

How does this detail develop the article's CENTRAL idea?

- (A) It describes the types of habitats steppe eagles like to live in.
- (B) It highlights why the text message bill was so high for the study.
- (C) It explains how the steppe eagle project is protecting the birds.
- (D) It shows some of the threats the steppe eagles face.

