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Make Science, Not War: In Luhansk, Enthusiasts Chase Lightning

By Alexey Eremenko

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Kryukov and Pavlov posing proudly in a field in Luhansk, east Ukraine.

The war raging this summer in the Ukrainian province of Luhansk did not put off two local science enthusiasts from pursuing their audacious goal of harnessing lightning.

The Luhansk DIY lightning chaser kit is simple: All you need is a kite (depicting Superman), 500 meters of electrically charged thin wire and a source for said voltage (an ancient TV set broadcasting local news).

Do it right, and not even a war can stop you.

"We were afraid the military would mistake lightning strikes for artillery fire," lightning chaser Pavel Pavlov told The Moscow Times.

"But we never had any trouble with them during the experiments," he said in a Skype interview from Luhansk on Monday.

Lightning is not the only subject of the Kreosan project created by Pavlov and his partner-in-science Alexander Kryukov, who declined to reveal their ages.

In their homemade videos, the duo also offers instructions on how to create a high-voltage generator and a welding set in 15 minutes each, demonstrates how to build an aerostat and tests to the maximum the untold capabilities of microwaves.

And regardless of the war, it seems to be a success: The Kreosan channel on YouTube had more than 7 million views on Monday, and 66,000 followers.

Science for the People

Luhansk's modern-day Benjamin Franklins began their experiments in 2012, and by last fall, their videos had started getting six- and seven-digit views.

The duo has an engineering background: Pavlov, a lanky youth fond of sweatpants, is an appliance repairman, and the earnest-looking, nerdy-dressing Kryukov is an experienced television technician.

They see their job not as research — in the lightning videos, they freely admit their inability to explain the TV set's transformations under the bolt strike — but say they are promoting DIY science.

"We wanted to show interesting stuff to people," Pavlov said. "And we wanted to show what you can do yourself, and do it well."

Benjamin Franklin (a name the young experimentalist professed to be unfamiliar with), of course, pipped the Kreosan team at the post with the lightning experiments.

But sadly for Franklin, there was no YouTube when he was conducting his daredevil experiments.

Similar attempts to harness lightning have been filmed and uploaded, including in the U.S., but those usually use expensive equipment such as miniature rockets, Pavlov said.

The total cost of Kreosan's initial, lightning-to-old-TV-set experiment ran to 100 hryvna ($6.50) — half of which was spent on gas for the decrepit scooter on which the young men chased the storm.

Money and Power

Their main problem is, by their own admission, filming and video editing equipment: The enthusiasts lack high-speed cameras with which to catch the precise millisecond of the lightning strike, and they edit the footage on an old HP Compaq laptop that can take days to process a file, Pavlov said.

He said they have enough footage for dozens of videos, but struggle to prepare them for publication.

The videos, lamentably for English-speaking audiences, are currently only available

in Russian (with an inimitable Ukrainian accent). Pavlov said they are both lousy at English, and too busy earning a living to devote time to language studies.

The videos feature halfhearted requests for crowdsourcing, but less than 1 percent of viewers donate, Pavlov said.

And money is scarce in war-torn Luhansk, where their monthly salaries fluctuate between 1,500 and 3,000 hryvna ($96 to $194) a month, Pavlov said.

The four-month power outage suffered by the city also did nothing to help either their incomes or the video-editing process.

Nuisance of War

Luhansk, along with the neighboring province of Donetsk, was the site of pitched battles between pro-Russian insurgents — allegedly backed by the Kremlin — and the Ukrainian army from May to September, when a fragile cease-fire was agreed. The UN estimates the total death toll, including combatants on both sides and civilians, at above 4,000.

Pavlov — who answered questions during the interview while Kryukov, who he said was busy, sat nearby — tiptoed diplomatically around the issue of the war.

"We're neutral, we just want the enmity to end," he said. "But some people, especially the elderly, are tired and say they don't care anymore who has power, as long as they pay people's pensions."

The experimentalists admitted to some run-ins with the separatists, who stopped them and questioned them during their work — sometimes at gunpoint.

When asked if they had considered fleeing the city, Pavlov said they would not be against the idea, but they have nowhere to go.

"Some people invite us, but my understanding is that they are school students who don't really get what having a refugee over means," he said.

Banana Freighter Dream

But they still have big plans, including for a spinoff channel documenting their hitchhiking across Ukraine and Russia.

Pavlov professed much enthusiasm for travel, dwelling less on their experiments — which are, admittedly, comprehensively documented online — than on his past hitchhiking trips to Moscow, Crimea and southern Russia.

"My dream is to go sailing on a freighter transporting bananas to Ecuador," he said.

"You sign up to mop the decks, you can even make a little money. But you need to speak English and have a sailor's passport, and I'm drawing a blank on both — so far."

Watch below to see how Pavlov and Kryulov harnessed lightning using an old television set.

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