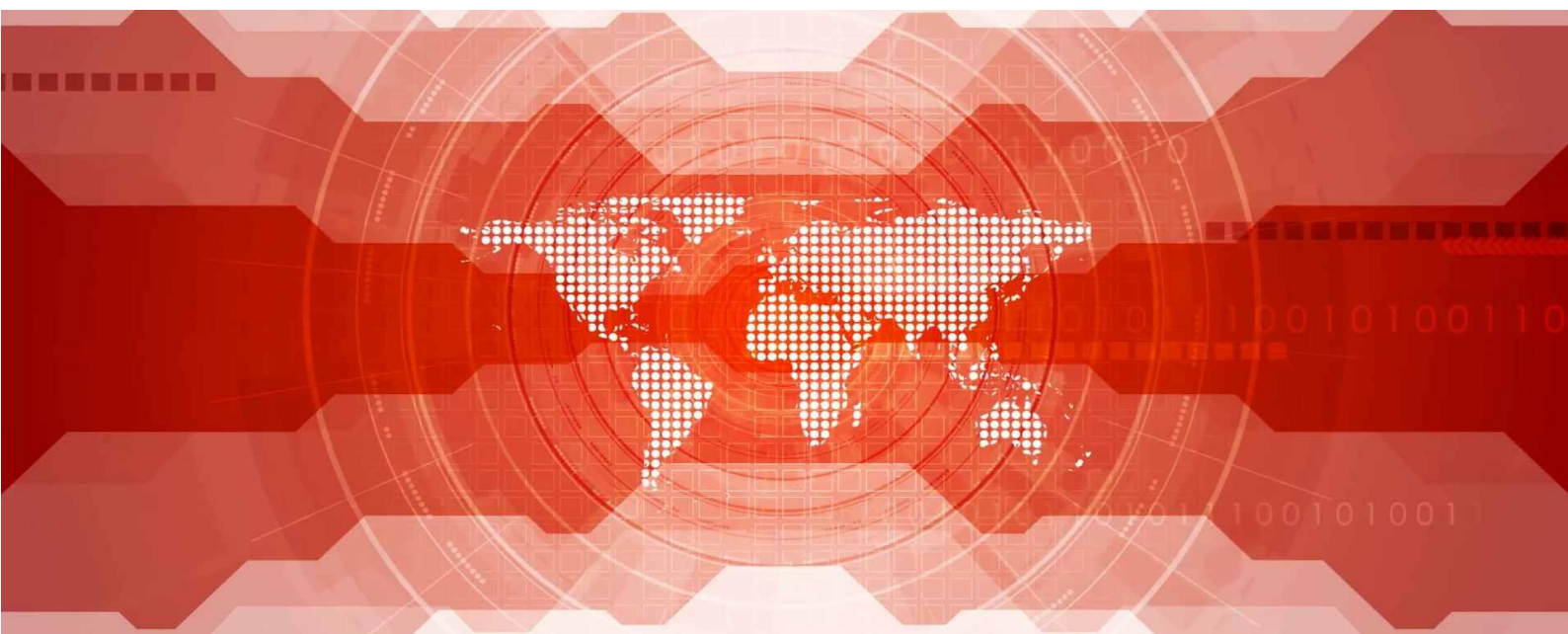




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TGAlert Report

Camouflaged AP Mines Deployed from UAVs by Russian Forces



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Summary

In October 2023, visual documentation, including videos and images started to appear in Russian and Ukrainian Telegram channels, showing camouflaged AP mines released from UAVs on the battlefield by Russian forces.

Over time, more footage appeared, showing the Russian Army actively employing this TTP.

Camouflage increases the efficiency level, whether the mine is released from the air (which is a relatively new trend,) or placed manually. The tactic itself is not new but is relevant for any active battlefield. The TTP is traditionally used to target enemy personnel but may also be a threat to bomb disposal and EOD personnel tasked with handling and clearing areas.



PMN-series mine camouflaged with soil

Analysis

On November 11, 2023, a Russian Telegram channel affiliated with the military engineering posted images of camouflaged PMN-series mines, prepared for being released from UAVs. In the images, we can see several different kinds of camouflage. According to the post, the images were sent to the channel's admin by one of the subscribers, who is using them on the battlefield.

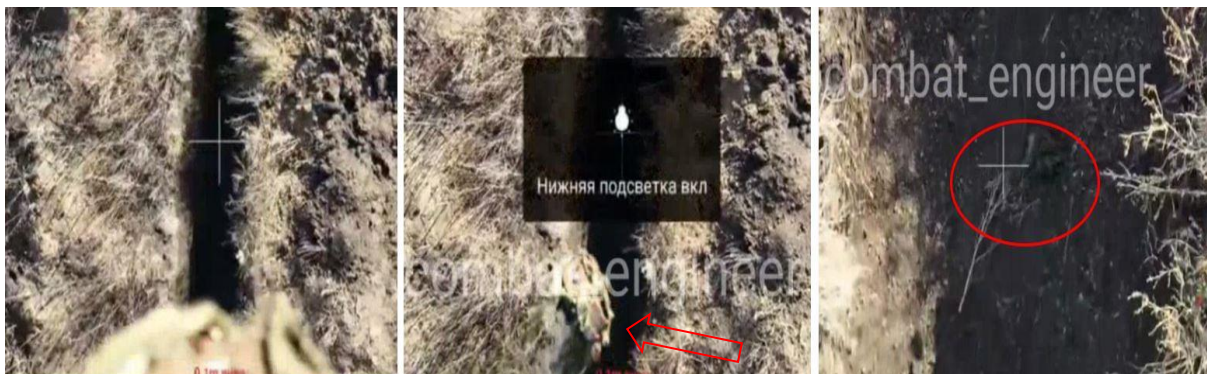


PMN-series mines camouflaged with soil



Camouflaged PMN-2 mine with wire or rope attached (note the DJI Mavic in the background)

The same day, same Telegram channel published a video, showing a camouflaged mine, successfully deployed from a drone into a trench of Ukrainian forces.



Camouflaged mine deployed from a UAV by Russian forces in Ukraine, November 2023

On October 28, 2023, another video documenting several mines camouflaged with dry grass, planted from the air by Russian forces, was published on a Russian military-related Telegram channel.



Camouflaged mines planted from the air by Russian forces

On October 15, 2023, a video of a warning character was published on a Ukrainian war-related Telegram channel. In the video, several PMN mines of different types, camouflaged with hay, seized by Ukrainian forces are exhibited. The speaker explains in Ukrainian how the mines were camouflaged and prepared for being attached to UAVs by Russian forces. A screw is installed in the mine's casing, with 5-8 meters of fishing line attached to it. The other end of the fishing line is then attached to a UAV.



Camouflaged PMN-1 and PMN-2 mines seized by Ukrainian forces (note the fishing line and the screw)



A few more camouflaged PMN-series mines seized by Ukrainian forces

General Notes

The camouflaged mines released from UAVs have not been documented before and this is their first appearance in the Ukrainian arena, being used by the Russian Army. Nonetheless, different types of camouflaged standard weapons and IEDs were previously seen there, and in other arenas.

With regard to Ukraine, camouflaged MON-50 mines were witnessed in different locations in the country during the year. On February 14, 2023, a video showing Claymore-type mines camouflaged in tree bark by Ukrainian forces was published on a Russian Telegram channel.



Claymore-type mines camouflaged in tree bark by Ukrainian forces, Ukraine, February 2023

In April 2023, several cases of camouflaged mines planted in the area by Russian forces were seen in Melitopol. In the first incident, a MON-50 directional fragmentation AP mine was documented attached to a tree and covered with some dried grass. The second case includes a tree bark-camouflaged MON-50 Claymore-type mine. (See [Möbius](#) report “TM-83 Off-Route Mines with Unique Initiation Systems, Ukraine,” ref. 35/2023)



Camouflaged MON-50 mines attached to tree trunks by Russian forces in Melitopol, Ukraine

The climate in Ukraine is diverse and not all types of camouflage are relevant for a specific season. Also, as the war has already been ongoing for over a year and a half, new tricks keep on appearing to make the service easier and safer. Thus, in early October 2023, fabric casings for camouflaging MON-50 mines both in autumn and in winter were demonstrated by the Ukrainians. The white casing is made by the Ukrainians and the green one, with leaves attached to it, was shown in a warning post from a Ukrainian source.



Camouflage casings for MON-50 mines

As for other arenas, the use of rock camouflage for IEDs is a common TTP in areas of conflict in the Middle East, and has been employed by almost all the players in this region, including the Islamic State in all of its areas of operation, the Syrian Arab Army, Hezbollah in Lebanon and Syria, the Iran-backed Houthis in Yemen, Al-Qaeda in Yemen, and the Taliban in Afghanistan.

As the rock camouflaged IED must perfectly conform to its environment, we can see different camouflage designs to match the various rocks in the different geographical areas. (See [Möbius](#) report *"IS Workshop for IED Rock Camouflage Shells, al-Bab, Syria,"* ref. 25007)



SAA IED rock camouflage shells, made to resemble basalt rock, Daraa Governorate, October 2016



Hezbollah IED rock camouflage shells (note protruding antenna on right), Busra al-Sham, Syria, 2014



IED rock camouflage used by the Houthis in the sandy border area between Yemen & Saudi Arabia

Another interesting type of a nature camouflage was documented on October 25, 2018, when a Houthi IED planted in the Kilo-16 area, east of Al-Hodeidah port city, in western Yemen was neutralized. The IED comprised at least one Claymore-type IED concealed inside a palm tree trunk camouflage shell planted next to a palm tree plantation. (See [Möbius](#) report *"IED in Palm Tree Trunk Camouflage, Yemen,"* ref. 81/2018)



Cleverly camouflaged IED in its palm tree trunk shell

The use of wood in IED camouflage was also documented in Yala Province, in southern Thailand, in January 2014. On this occasion, local residents alerted police to the presence of an IED concealed inside a log planted in a pile of chopped wood on the roadside, near a house under construction. (See [Möbius](#) report "*IED Camouflaged in a Log, Yala, Thailand*," ref. 14212)



The IED concealed inside the hollowed-out log comprised a large red container and RC initiation system, Yala, January 2014

The camouflage TTP is not new, but is always relevant in any warzone. The variety of ways of preparing camouflage for standard weapons or IEDs is endless, as well as the types of materials used for it - from cement and fiberglass to simple wood and soil. Those that may be found in nature, such as tree bark or dried grass/leaves, are the cheapest and most available ones. However, seasonal aspects of certain regions make adjustments, thus, in advance of the coming winter season, white fabric cases were prepared for MON-50 mines in Ukraine.

According to the warning posts by Ukrainian sources, camouflaged PMN-series mines delivered by Russian forces from UAVs to different locations in recent months, mainly at night, are used for a few tasks. They can be found directly in the trench (as demonstrated in one of the videos) and on the paths away from the position or near the exit points. In addition, such items can reportedly be found placed on roads near the front line, which can be reached by mortar fire. In this way, they help to disable wheeled machinery, which is destroyed by mortar shelling afterward.

Of note, when the mine is delivered via UAV, instead of being positioned manually, there is no possibility to bury it in the ground – it can only be laid on the ground. With no camouflage, the mine would be easily visible, which would make the whole TTP much less successful. Thus, the camouflage definitely increases the level of efficiency, making the planted weapon more dangerous both for the soldiers and the EOD personnel tasked with handling and clearing these areas.

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