

# The Elusive Pimpernel

(February 2023)

February 3<sup>rd</sup>: Great upheaval in diplomatic relations, as the U.S. Secretary of States cancels his immediate departure for Peking<sup>1</sup>.

1. The culprit is said to be a stratospheric balloon hovering over the United States (let's call it the Elusive Pimpernel);
2. Pimpernel, as all balloons, is passive, and so it drifts in the wind, since it is not steerable;
3. If Pimpernel came from China, it must have traveled with the wind about 11,000 km, on a voyage that took probably 4 or 5 days at least;
4. Considering its route, a slight 4 or 5 degrees deviation would have caused it to miss the United States entirely;
5. The military claim that it cannot shoot Pimpernel down lest someone be hurt on the ground;
6. It is worthwhile considering that all stratospheric balloons eventually end up falling on the ground;
7. For reference, between 750,000 and 2,000,000 meteorological balloons are launched every single year around the globe;
8. Most, if not all, reach the stratosphere and eventually gently fall back to the ground, slowed down as they are by a small parachute;
9. There is no reason to believe that Pimpernel has no parachute;
10. The military has not explained how it would shoot down Pimpernel;
11. Pimpernel being in the stratosphere could hover at an altitude of possibly about 40 km;
12. The service ceiling of a high performance fighter such as the F-22 Raptor, which was selected for the shooting mission, is about 20 km;
13. If Pimpernel were hovering at an altitude within range of the scrambled F-22 Raptor fighter jet, there is little doubt that the military would have produced by now at least one picture taken from the fighter jet;
14. The F-22 Raptor is equipped with a rotary machine gun that fires bullets with a muzzle velocity of 1,000 m/s but a practical range of 600 m only;

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<sup>1</sup> English for Chinese 北京; Běijīng

15. At its service ceiling, the nose of the aircraft cannot be pitched up, otherwise the ceiling would not be the ceiling;
16. The military has not explained how the F-22 Raptor would shoot down a target that hovers at more than twice the ceiling of the aircraft, 22,000 m (70,000 ft) above its cockpit;
17. At such distance the angular size of Pimpernel is about  $1/10^{\text{th}}$  of one degree, quite a small target (one fifth of the angular size of the moon);
18. Pimpernel being non-metallic has no radar signature, and the military has not explained how any missile could possibly not miss it.

It would seem that Pimpernel could not have been voluntarily steered precisely towards the nuclear missile silos of the Northern United States, and no one knows how to shoot it down.

Which does not prevent anybody and everybody around the Press Rooms of the world to have a learned opinion about the matter, although in quite a hysterical fashion.

There seems to be a second balloon on the horizon. Let's pray it will keep each and every Press Room busy as a beehive.

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February 4<sup>th</sup>: A fighter jet finally shot down Pimpernel at 2:38 PM EST, but not until the Balloon had descended to 58,000 ft, which was below the fighter jet's ceiling. The President congratulated the pilot for not having missed a bulky defenseless and immobile target as large as three buses and level with the pilot. Hail the Conquering Hero!

It has been repeated quite bizarrely that the Balloon could not offer anything new over low altitude satellites. However, it can also be claimed that since the Balloon was 30 times closer to Earth's surface than low altitude satellites, the resolution of its cameras, if any were on board, would have been 30 times better than from a satellite, therefore offering a resolution of 10 mm per pixel instead of the usual 300 for a satellite camera, which could hardly not be considered as a significant improvement.

Also, several press outlets have echoed military statements according to which the Balloon "*can be maneuvered remotely through small motors and propellers*". Surely, no one with any understanding of aeronautics will conclude that the Balloon can be propelled with any force sufficient to significantly alter its course in 100 or 200 km/h winds, which, given the very bulky aspect of the Balloon and its absolutely non-aerodynamic shape would require very large propellers and, above all, a very large storage of energy. On the other hand, "*small motors and propellers*" would probably be sufficient to rotate the Balloon around its vertical axis in a yaw motion, and to adjust the position of whatever apparatus is present under the Balloon.

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February 6<sup>th</sup>: U.S. Northern Command Chief General Glen VanHerck confirmed on Monday earlier reports that similar balloons had entered U.S. airspace undetected in the recent past.

The general also said that the balloon was up to 61 meters tall, and carried a payload "*the size of a jetliner*" with a mass "*in excess of a couple thousand pounds [one ton]*". The general added that the balloon potentially carried explosives "*to detonate and destroy the balloon*" if necessary.

For one thing, one could wonder how the general can be aware that similar reportedly huge balloons have entered U.S. airspace in the past if they were never detected, and, for another, the fact that such massive inert objects are not detected would indicate that the state of technology is far from being sufficient to detect them, let alone shoot them down.

Also, one could question why, if the balloon was indeed equipped with self-destructive devices, those devices were never activated.

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February 9<sup>th</sup>: the U.S. government has announced that at least one Lockheed U-2 high altitude surveillance airplane had been dispatched to monitor Pimpernel. However, it may be noted that the aircraft's ceiling does not exceed 80,000 ft (24 km), and no close-up picture of the balloon was published, which would indicate that at the time Pimpernel was still well above the reach of any high performance airplane.

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February 10<sup>th</sup>: the U.S. government reports that another balloon was shot down today, this time over Alaska. The balloon was reportedly much smaller than Pimpernel, and was hovering at the altitude of 40,000 ft only, well within reach of jet fighters, although the U.S. government characterized the balloon as being a high altitude object. For reference, most business jets fly at altitudes between 40,000 and 45,000 ft.

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February 11<sup>th</sup>: according to the Canadian Defense Minister, another object was shot down, this time over the Yukon Province. The object was described as "*flying at an altitude of approximately 40,000 feet (12,000 meters), had unlawfully entered Canadian airspace and posed a reasonable threat to the safety of civilian flight*". She added that the object was "*potentially similar to the one that was shot down off the coast of North Carolina though smaller in size and cylindrical in nature.*"

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February 12<sup>th</sup>: one more object was shot down over Lake Huron, this time at an altitude of only 20,000 ft (6,000 meters), well within reach of military aviation. "*We're calling them objects, not balloons, for a reason,*" General VanHerck, head of North American Aerospace Defense Command (NORAD) and Northern Command, said. Quite startlingly, the general said he would not rule out aliens or any other explanation.

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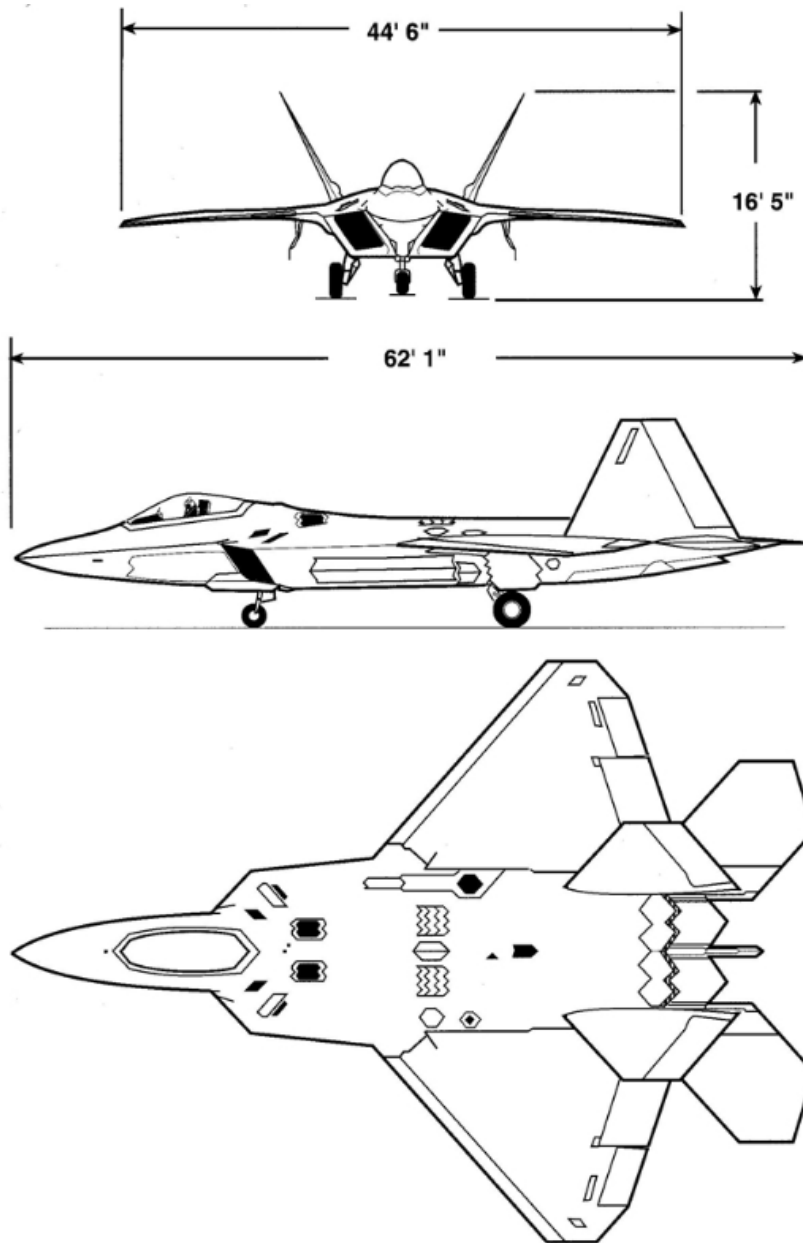
February 17<sup>th</sup>: it appears that at least one, and perhaps three, of the elusive balloons that were shot down in the recent days were private recreational so called "*pico*" balloons that belonged to a hobbyist group, the *Northern Illinois Bottlecap Balloon Brigade (NIBBB)*. The balloons have an individual value of reportedly \$200, while each missile used by the Air Force to down them has a cost of about half a million.

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March 27<sup>th</sup>: it appears that the U.S. government has for some reason classified pictures taken of Pimpernel. However, some were published in the past several weeks, which can be analyzed geometrically, showing that the diameter of the balloon was close to 35 m and its altitude 60% higher than that of a Lockheed Martin F-22 Raptor fighter jet.



***Pimpernel and a Lockheed Martin F-22 Raptor above NW United States: balloon altitude is 60% higher than the Raptor's. If the Raptor is flying at its ceiling of 20,000 m, then the balloon is at a 32,000 m altitude, way above reach of any jet fighter.***



*Lockheed Martin F-22 Raptor: Length 18.92 m, service ceiling 20,000 m (65,000 ft)*



*Pimperl and a Lockheed U-2 above the Eastern United States: by comparison with the shade of the U-2 the balloon's diameter of about 35 m can be inferred.*





***A Lockheed U-2 airplane in flight: Length 19.20 m, service ceiling 24,000 m (80,000 ft)***

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One could muse that Pimpernel could have been just a probe into the defenses of the United States in the layer of airspace comprised between the altitudes of about 20 km and 100 km. It would seem that said layer of airspace is reserved to passive stratospheric balloons up to about 50 km, and is impractical above 20 km for any object other than ballistic. Furthermore, a ballistic missile would be quite incapable of hitting a relatively small drifting balloon at such great distance, moreover non-metallic.

The resolution of images taken through a highly stabilized camera from an elevation of 50 km, for example, would be 12 times better than from a low altitude satellite, bringing the size of one pixel from 300 mm to 25, which would be a significant improvement.