Dear editors, SCIENTIFIC AMERICAN. Draft 6 on 2025.10.26
From Nick Gessler, smith of the "sprawling website" mentioned in the Nov 2025 article "Meteorite Heist."

Thank you for illuminating some of the complexities in compiling the provenance and histories of artifacts. The "Meteorite Heist" alerts us to the risk of Shiid Birood's potential obliteration after which its impact site will likely follow. The sellers have not ruled out reducing it to souvenirs. We, not willing to wait the 6-8 months to publish in a peer-reviewed professional journal, created our "sprawling website" to document Shiid Birood's provenance and significance. Science is built on evidence, and readers are invited to visit us at: https://people.duke.edu/~ng46/El-Ali/. There they will find a score of videos, stills, translations and reports, supporting its importance as both a National Treasure of Somalia and a UNESCO World Cultural and Natural Heritage Site. We invite you to do your own analyses. For a quick visual summary, click on the blue "Photo Journal" banner. We have the indigenous knowledge that this iron mass was associated with knives, and we have the homologous evidence from Cape York, Greenland, where the Inuit Eskimo ironsmiths fashioned knives and harpoons tips made from coin-sized blades of iron, laboriously mined from huge meteoritic masses.

Somalia has poured the foundation to conserve Shiid Birood's natural and cultural heritage. Its draft provisional constitution, Article 31, Item 2, proclaims, "The state shall collect, protect and preserve the country's historic objects and sites, whilst developing the know-how and technology that shall enable the fulfilment of such an obligation." It has enabled Somalia's Permanent Delegate to UNESCO, Mohamed ali-Nur Hagi to encourage African states to focus on their own heritage, and to place three sites on Somalia's own tentative list. These are the Bushbushle National Park, the Hobyo Grass and Shrubland, and the Second Lido Lighthouse in Mogadishu. On January 29, 2025, we proposed that Shiid Birood, the meteorite and its impact site, be included. The Hirshabelle State of Somalia, Minister of Information, Culture and Tourism, Adan Barre Mohamed Muse, has appealed to the international community to recognize, "this cultural and historical bond extend[ing] beyond physical geography into the community's identity, folklore, and social memory. It is therefore not only a remarkable extraterrestrial object of scientific interest but also a sacred cultural artifact rooted in Somali Indigenous heritage." Member of Parliament, Dahir Amin Jesow, appealed more forcefully to his constituents, "Do not try to ride two horses at the same time, O Galje'el. Ride on one horse. Either go to al-Shabaab and let us fight you. Or stand with our sons who are fighting and aid them."

The Mogadishu Alport Weighbridge certified Shiid Birood's weight as 15,150 kg, making it the 7th or 11th most massive in the world, and the 2nd or 3rd most massive in Africa, a firm measure of world natural heritage significance. Imagery tells us unequivocally that the meteorite has

been intensively and extensively hammered. It shows *plastic flow* on its top, along its sides, and down underneath the ground. Shiid Birood is the 2nd discovery of a meteorite mined for metal in the world. The 1st such discovery was made in 1819, by an expedition looking for the Northwest Passage, by Capt. Sir John Ross of the ship Isabella, Capt. William Edward Parry of the ship Alexander, and his Science Officer Edward Sabine. They encountered a group of Inuit, near Cape York, Greenland, with knives and harpoons inset with meteoritic iron blades. All three logged that meeting. Capt. Parry had this to say:

Monday, 10 August 1819: "Each of the natives was provided with a kind of knife, made of small pieces, or plates of iron, which were set close together in a grove made in a piece of narwhal's horn: the end piece was rivetted, but the others were kept in their places merely by being driven tightly into the groove. Very diligent enquiry was set on foot as to where they found the iron of which these knifes were made; but all we could learn from them was, that they met with it near the shore, at some distance from this place. Our conjecture was, that it was native iron, and that they were afraid of giving us much information respecting it from an apprehension of our taking it away. They promised, however, to pay us another visit on the following day, and bring some of the iron with them. I shall therefore forbear saying any thing further about them at present, as we shall probably learn a little more of them in the course of their second visit."

Thursday, 13 August 1819: "After having conversed together for a short time, they were prevailed on to come onboard. Little persuasion was indeed necessary on this occasion, as they had heard of the kind reception our first visitors met with, they having reported us to be very good people. Those to day did not appear to be either so much amazed at what they saw, or yet so timid, or rather suspicious, as the first party, which arose, no doubt, from their being more confident of their personal safety; a confidence founded on the reports of those who had preceded them. They evinced the same avidity for wood and iron as the former; and, in order to gratify them, they were presented with a few pieces of each. They likewise received some other useful articles, such as needles, scissars, &c., in return for which they gave narwhals' horns, one of their sledges, and a dog. They had knifes similar to those already described; and it appears from what Sacheuse could gather from them, that they procure the iron of which they are made, from a mass of native iron, distant, agreeably to their information, about a day's journey to the eastward of this place. They likewise told him that their only object, in coming so far from their own country, which lies to the northward, is to procure some of this iron, which they break off with great difficulty by the means of stones, and then beat out into the small plates of which the knifes are made. Thus far their description agrees so well with what we find these rude instruments to be, that I think there cannot be any doubt of the truth of what they have related."

The search for, and retrieval of the Cape York irons, soon followed. Less common than meteorites, the 22 tonne telluric iron Ovifak, discovered by Erik Nordenskiöld in 1870, is now at the Natural History Museum, Stockholm. The 3.0 tonne Woman, 0.4 tonne Dog, and 30.9 tonne Ahnighito meteorites were found by Robert Peary in 1894 and sold to the American Museum of Natural History, New York. The 3.4 tonne Savik I meteorite was discovered by Knut Rasmussen in 1913 and is at the Natural History Museum, Copenhagen, as is the 20.1 tonne Agpalilik or Man meteorite, discovered by Vagn Buchwald in 1963. The Inuit had laboriously extracted iron from Ovifak, and the Cape York Woman, Dog and Savik I. In 1975, Vagn Buchwald, in his major 3-volume work on iron meteorites, proclaimed, "Probably no other meteorite has been so intimately connected with the life and fate of so many people as Cape York." Shiid Birood now shares this accolade. In 1985, Buchwald published a study of the blades found inset into Inuit artifacts. Twenty samples ranged from 1 to 10 grams each in weight, an average of 4.2 grams. Experimentally, he also *cold-forged* two axes, one each of steel and meteoritic iron, measuring their changes in hardness as they thinned. Two centuries ago, the first meteorites mined for metal were discovered at Cape York, weighing 6.8 tonnes. Shiid Birood in Somalia, the second such discovery, is now the first in mass at 15.15 tonnes.

Cape York foretells the evidence we should expect to find in Somalia, if people at both sites mined meteorites for metal. In 2014-15, researchers at the Greenland National Museum & Archives launched an archaeological expedition to investigate the cultural history of the Cape York irons. They noted 16 tonnes of basalt cobbles hauled in from 50 km used as hammers at the site of the Woman, and another 10 tonnes of basalt cobbles used as hammers at the site of Savik I. They found shelters, caches, tent rings and cairns covering an area of one hectare, and noted that trade in those meteoric blades reached 2000 km and spanned 1500 years. Mikkel Myrup was the first to cite the lips of iron on the Woman as evidence of *plastic flow* from hammering. Those features and more cover Shiid Birood. But, how does one hammer flakes off of an iron mass? “With great difficulty,” according to Capt. Parry’s translator, Sacheuse. But we commonly see that today, as a trip to most any workshop will reveal. In our videos CV1 and CV17 we see the man removing our samples with a hammer and chisel. The mushroomed heads of each tool show the *plastic flow* from innumerable blows. They typically produce flakes of about 4 grams, the same sizes of the Inuit blades.

Today, we spend millions to combat *metal fatigue*. Prehistorically, our forebears spent days encouraging it. Meteorites are embedded deeply in cultural traditions.

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