

World Human Spirit Day

So many of our statements nowadays end with 'the world as we know it.' World Human Spirit Day is a celebration of the fact that what we know about our own world is limited and superficial. It is a day to wonder at our achievements on this planet as humans, and to contemplate the endless possibilities we have as spirits. A day to give a higher power thanks for what we have and what we don't have, for making us who we are and for giving us the ability to touch others.



#J'ADORE

Mehendi Mania

Weddings are incomplete without a mehendi event, and these stunning mehendi designs for the brides-to-be will leave all amazed.



Wedding season is ongoing and we are all aware of the importance of mehendi events. And for the mehendi to be a success, you need bridal mehendi inspo that will wow everyone. Here are the trendiest bridal mehendi designs that brides-to-be can try to look their utmost best.

Criss-Cross Vines Mehendi Design



This design uses a detailed line structure followed by spaced leafy vines. The simple use of dots and floral motifs make this design even more beautiful. This full hand bridal mehendi design can transform your look entirely. Try this mehendi design to get the ultimate bride look.

Half and Half Henna Mehendi Design



This trendy bridal mehendi design uses symmetry for perfection. As the name suggests, when both the hands are brought together, the two halves form one complete motif. This artful design will leave all your guests awestruck. Be sure to stay still while getting this mehendi design to avoid any asymmetry.

Floral Mandala Mehendi Design



This bridal mehendi design uses a combination of mandala and floral patterns. A variety of motifs and patterns have been incorporated in this elegant design and have been placed very intricately to make it more appealing to the eyes.

Lotus Mehendi Design



This year, the lotus motif has gained immense popularity among all the floral motifs. The mehendi design imitates the Mughal era paintings and the floral motifs which are often used while building gateways. Lotus mehendi designs are the new rage and you must try it for your big day to add charm to your look.

Jewellery Mehendi Design



This design is for the bride who loves minimalism but still wants to look chic. The main component of the design are the linking chains which look like ornaments adorned by the bride. These chains connect different floral patterns. This hassle-free design is perfect for the bride who does not want to spend too much time getting her mehendi done.

Bhimthadi Horse

Return of a native



Bhimthadi Horse.

The Bhimthadi breed was developed in Pune district in 17th and 18th centuries during the Maratha rule, by crossing Arabian and Turkic breeds with local ponies. These horses proved excellent for Maratha forces in fighting the Mughal army in the hilly terrains of Western Maharashtra, where lighter and smaller steeds were essential. During their conquests in the 18th century, the Marathas were proud to claim that the Deccan horses had quenched their thirst with waters of the Indus. The warrior and Maharajah Maratha Yashwantrao Holkar (1776-1811) is reputed to have always battle mounted a mare named *Mahua*, of Bhimthadi breed.



Anjali Sharma
Senior Journalist & Wildlife Enthusiast

'Bhimthadi' combines 'Bhima' with 'thadi,' meaning riverbank. This breed is primarily located on the Deccan plateau, spanning areas in Pune, Satara, Solapur, Ahmednagar, Sangli, and Kolhapur districts.

A poetic description of the approaching Bhimthadi goes thus

The six horses come galloping along the low-roofed stable building in Baramati, Maharashtra, a black stallion and a bay-coloured mare, followed by a white and a dun-skinned pair. Pelts gleaming, manes flowing, tails flying and hooves pounding the dust, they appear to be a force of nature. Hand-picked specimens of the famed Bhimthadi or Deccani horse, one can almost imagine the creatures among their ancestors in the 17th and 18th centuries, in a troop of Maratha horsemen, charging at the enemy and driving them off the field.

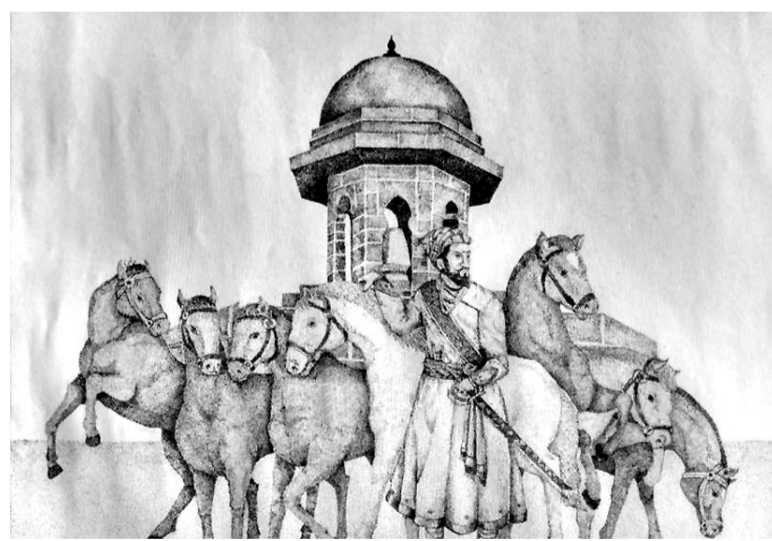
Once the pride of the Maratha empire, the Bhimthadi horse had faded into oblivion in the past 200 years. Its recognition now, as a separate indigenous breed, could spell a reversal of fortunes for the breed. Having faced a prolonged period of neglect for about 200 years, the Deccani horse, locally known as the Bhimthadi horse, has now been officially recognized as an independent breed of horses, native to India.

Ranjeet Pawar, Founder of the All India Bhimthadi Horse Association, and Sharad Mehta, Head of the Regional Station of the National Research Centre on Equines in Bikaner, Rajasthan, made the announcement during a press conference at Deccan Gymkhana in Pune.

Bhimthadi horses are spread through Pune, Solapur, Satara and Ahmednagar district of Maharashtra. The average height of stallion is about 130 cms and of mare is 128 cms. Bhimthadi horses are mainly used for transportation of household material during migration of the pastoralist people. Named after the *Bhima* river,

During his lifetime, Shivaji Maharaj had a total of 7 horses. Some of these horses were stallions and some mares. The 7 horses were Moti, Gajra, Indrayani, Vishwas, Ranbir, Turangi, Krishna. Many historians are of the opinion that the last horse ridden by Shivaji Maharaj was Krishna, a white stallion.

Variants of Bhimthadi are native to the Deccan Plateau. Historically, the steed was an inherent part of the Maratha Cavalry, used effectively in battles



The seven horses of Shivaji Maharaj.

#NAMED FAMED



on the hilly terrain. It also functioned as a pack-horse of the Maratha Confederacy. The breed's contribution in enabling warriors of the Maratha forces, to defeat invading and occupying armies, is exemplary. Regrettably, the Bhimthadi steeds, that were used by Shivaji Maharaj in guerrilla warfare, never figured in the list of the seven recognised breeds of India. Hence, we endeavoured to put things in the right perspective, and finally, succeeded. We garnered support, forming a team from the Agricultural Development Trust (ADT), Baramati and the National Research Centre (NRC) on Equines, Bikaner. "Dr. Sharad Mehta, Head of the Regional Station of NRC, Bikaner, led a delegation of scientists to Baramati and adjoining areas, interacting with farmers and horse keepers to get an insight into the hardiness and utility of this native breed."

Responding to Mirror's query, Pawar said, "We wanted to get Bhimthadi breed registered from 1996, but could not find the right direction until Dr. Mehta guided us." "As this indigenous breed was not officially recognised in India, with the support of the Agricultural Development Trust (ADT) at Baramati, a team was formed in association with the National Research Centre for Equines, Bikaner to fulfill the



administrative and scientific requirements for its inclusion in the national list. A delegation of scientists, led by Dr. Sharad Mehta, visited Baramati and surrounding areas, where they interacted with farmers and horse keepers to understand the hardiness and utility of the breed," Pawar said.

According to Mehta, blood samples of over 1,000 Bhimthadi horses were tested at the National Research Centre on Equines, Bikaner while DNA testing of over 500 samples was done to ensure that the animal does not share its DNA with any of the established breeds in India.

"The process took about three years. Of the 66 applications received for getting the recognition, eight have been approved by the committee and Bhimthadi



Ranjeet Pawar plans to introduce Bhimthadi horses.

their thirst with waters of the Indus. The warrior and Maharajah Maratha Yashwantrao Holkar (1776-1811) is reputed to have always battle mounted a mare named *Mahua*, of Bhimthadi breed.

It seems that the Marathas raised a specific breed from the end of 18th century. According to local oral tradition from early 19th century, the breed was crossed with 500 Arabian horses and mares, obtained by the Nizam and nobles of Hyderabad directly from Arabia. The breed is described as 'Bhimthadi' in British sources.

However, the breed was allowed to degenerate during British rule in India. The government of Gujarat took an initiative in 2010 to perform research on saving Bhimthadi and other near extinct breeds.

Validation of the breed

In his description of the economy of India at the end of the 19th century, Sir George Watt was very impressed with this breed, he considers it one of the best in India. He reports that the best ponies are named 'Dhangar' or 'Kihlari.' People see them as a separate breed, but Watt believes that this distinction comes from a difference in breeding practices, the breeders from the Dhangar community used to castrate their animals. The latter raise groups of 20 to 30 ponies. After their conquest of Maratha territories, the British encouraged inhabitants of the Bombay area to continue horse breeding



in order to restore the old characteristics that are useful to them in the breed, by investing from around 1827, about £100,000 in a stud farm in Alegaon Paga. The experiment was abandoned fifteen years later in 1842. Famines and various British conquests, that hit the region in the 19th century, wiped out the livestock of Marathas. In 1850, the so-called Deccan Race of the South completely disappeared. In 1898, the British could no longer find these ponies for their regiments, and therefore, replaced them with mules, because the race was decimated during the second campaign of Afghanistan. In 1907, the race horse breeder, Sir Humphrey Francis De Trafford reported that the Deccani breed lives 'bad days.'

Livestock distribution

Geographical origin of different Indian horse breeds
The breed originates from the valley of the Bhima River in the Pune District, hence its name, *Bhimthadi*. Deccani has become extremely rare. In 1988, according to the count sent to FAO, they numbered less than 100. It was later added to the list of indigenous breeds of horses by FAO, around 1998, with *Chumarnari* and *Sikang*, two other endangered breeds. CAB International (2002) considers race to be 'virtually extinct.' The conservation status of the Deccani was listed as 'critical' by the FAO in 2007.



Streets of Bombay.

#SMART-MATERIAL

Warm or Cool Buildings

As global warming causes increasingly frequent extreme weather events and variable weather, there is a need for buildings to be able to adapt, few climates require year-round heating or year-round air conditioning.



Chameleon-like building material changes its infrared colour, and how much heat it absorbs or emits, based on the outside temperature. On hot days, the material can emit up to 92% of the infrared heat it contains, helping cool the inside of a building. On colder days, however, the material emits just 7% of its infrared, helping keep a building warm.

"We've essentially figured out a low-energy way to treat a building like a person, you add a layer when you're cold and take off a layer when you're hot," says assistant professor Po-Chun Hsu of the University of Chicago's Pritzker School of Molecular Engineering (PME). "This kind of smart material lets us maintain the temperature in a building without huge amounts of energy." According to some estimates, buildings account for 30% of global energy consumption and emit 10% of all global greenhouse gas. About half of this energy footprint is attributed to the heating and cooling of interior spaces.

"For a long time, most of us have taken our indoor temperature control for granted, without thinking about how much energy it requires," says Hsu, who led the research published in *Nature Sustainability*. "If we want a carbon-negative future, I think we have



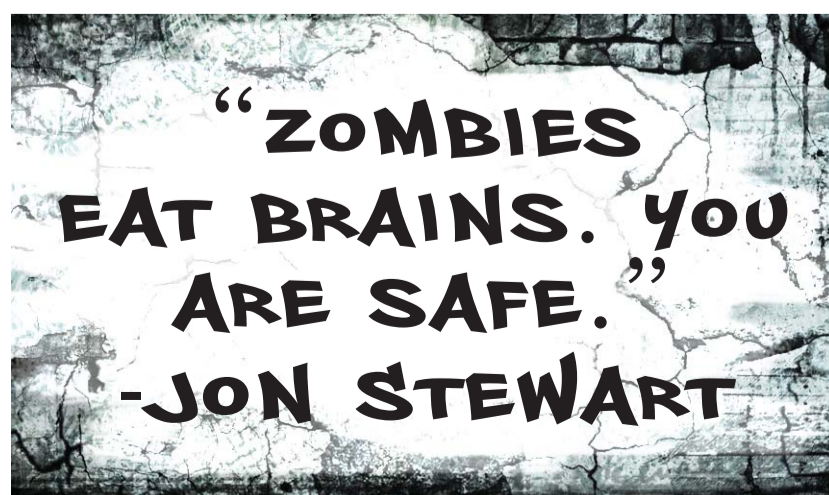
to consider diverse ways to control building temperature in a more energy-efficient way." Researchers have previously developed radiative cooling materials that help keep buildings cool, by boosting their ability to emit infrared, the invisible heat that radiates from people and objects. Materials also exist that prevent the emission of infrared in cold climates. "A simple way to think about it is that if you have a completely black building facing the sun, it's going to heat up more easily than other buildings," says graduate student Chemxi Su, the first author of the paper. That kind of passive heating might be a good thing in the winter, but not in the summer. As global warming causes increasingly frequent extreme weather events and variable weather, there is a need for buildings to be able to adapt, few climates require year-round heating or year-round air conditioning.



Hsu and colleagues designed a non-flammable 'electrochromic' building material that contains a layer that can take on two conformations, solid copper that retains most infrared heat or a watery solution that emits infrared. At any chosen trigger temperature, the device can use a tiny amount of electricity to induce the chemical shift between the states, by either depositing copper into a thin film, or stripping that copper off. In the new paper, the researchers detailed how the device can switch rapidly and reversibly between the metal and liquid states. They showed that the ability to switch between the two conformations remained efficient even after 1,800 cycles. Then, the team created models of how their material could cut energy costs in typical buildings in 15 different US cities. In an average commercial building, they reported, the electricity used to induce electrochromic changes in the material, would be less than 0.2% of the total electricity usage of the building, but could save 8.4% of the building's annual HVAC energy consumption.

"Once you switch between states, you don't need to apply any more energy to stay in either state," says Hsu. "So, for buildings where you don't need to switch between these states very frequently, it's really using a very negligible amount of electricity." So far, Hsu's group has only created pieces of the material that measure about six centimetres across. However, they imagine that many such patches of the material could be assembled like shingles into larger sheets. They say that the material could also be tweaked to use different, custom colours, the watery phase is transparent and nearly any colour can be put behind it without affecting its ability to absorb infrared. The researchers are now investigating different ways of fabricating the material. They also plan to probe how intermediate states of the material could be useful. "We demonstrated that radiative control can play a role in controlling a wide range of building temperatures throughout different seasons," says Hsu. "We're continuing to work with engineers and the building sector to look into how this can contribute to a more sustainable future."

THE WALL



BABY BLUES



By Rick Kirkman & Jerry Scott



ZITS



By Jerry Scott & Jim Borgman