

Harriet Tubman to replace Andrew Jackson on new twenty dollar bill

by Cole van Miltenburg
Sports Editor

Harriet Tubman will be featured on the front of the 20 dollar bill beginning sometime after 2020, replacing the image of former US President Andrew Jackson. This is considered especially significant because Tubman is the first African American and the first woman to be placed on a US bill. She was a former slave and abolitionist known for helping slaves escape the south in the 1800s through the Underground Railroad. On the other hand, President Jackson was a slave owner known for his discrimination against African Americans and Native Americans.

Originally, Tubman was planned to replace the ten dollar bill image of Alexander Hamilton, who was the first US Secretary of the Treasury. However, the public ruled against this, which might have been influenced by the recently popular Broadway musical Hamilton. The decision to change the 20 dollar bill was announced on Apr. 20 by current Secretary of the Treasury Jack Lew, after the public suggested several female candidates, including Pocahontas and Susan B. Anthony. Ultimately, Harriet Tubman received the most support, so it was decided that she will take the place on the bill. Secretary Lew wrote in a letter to the American people that Tubman's "incredible story of courage and commitment to equality embodies the ideals of



HARRIET TUBMAN: The abolitionist will be featured on the new bill by 2020.

democracy that our nation celebrates and we will continue to value her legacy by honoring her on our currency." The image of Andrew Jackson will be relocated to the back of the bill, where he will be incorporated into the image of the White House.

Also, several new changes are being made to the ten dollar bill. Although founding father Alexander Hamilton will be staying on the front, five historical female figures are being added to the back of the new bill. These additions include Sojourner Truth, a former abolitionist and women's rights activist; and Susan B. Anthony, who pioneered the women's suffrage movement in the US. The back of the bill will also depict a scene of women protesting for the right to vote. This new bill should be in circulation by 2020, which is the 100-year anniversary of when the 19th Amendment granted women suffrage.

Additionally, a "tactile feature" is being added to the new bills, so that they will be easier for blind people to use, as well as features that will make them harder to counterfeit. This massive overhaul in the current design of the currency will be the largest change since 1928, which is when the faces of former presidents were put on the front of each bill. Final design plans for all of the new bills will be released in 2020. The ten dollar bill will be made first, and the other bills will be produced sometime in the years after. (Sources: CNN, USA Today, CBS)

MIT shows off Hyperloop design

by Jack Zukin
World Editor

Hyperloop is another Elon Musk brainchild that seems like it could be straight out of a science fiction film, with its conceptual basis founded around the idea for a high speed transportation system that Musk envisions incorporating "reduced-pressure tubes in which pressurized capsules ride on an air cushion driven by linear induction motors and air compressors." Early estimates for Hyperloop's passenger and vehicle transportation system budget, with round-trip capabilities between SF and LA, hovers around 7.5 billion dollars. However, experts say that project overruns will far exceed these initial projections.



LEVITATION: The vehicle will only touch air to reduce drag.

Hyperloop will supposedly be able to travel just under the speed of sound with an astonishing top speed of around 760 miles per hour. On May 13, a team of engineering students from the Massachusetts Institute of Technology (MIT) looked to turn Musk's fantasy into a reality with the unveiling of a prototype pod the team plans on testing at a racetrack in Hawthorne, California this summer.

The team opted for a design slightly different than Musk's original idea by focusing the pod's devel-

opment on "a levitation system that uses magnets and a conducting plate." The group of engineers decided on the magnetic design for a number of reasons citing the fact that "any type of contact with the ground or a track gets really complicated from an engineering standpoint" when approaching the speed of sound.

The major problem that the MIT team faced in developing the pod came in attempting to perfect the braking system, which PhD candidate Raghav Aggarwal explains as a challenge because of the difficulty of stopping an object that is levitating without it touching anything. Aggarwal simplifies the design when he says, "We are basically moving a magnet really fast next to a piece of aluminum."

The MIT team, led by master's student in aeronautics Phillippe Kirschen, is the first of the thirty vying for the Hyperloop contract to unveil a prototype. The team put itself on the map after winning the SpaceX Hyperloop competition at Texas A&M University in January. The team's list of competition includes groups from University of Madison-Wisconsin, University of California at Irvine, Virginia Tech, Delft University of technology, as well as some venture capitalist funded teams.

The MIT team's recent developments mark an important milestone in the research and development phase of the Hyperloop project; a milestone that makes this seemingly impossible idea that much closer to becoming an actuality.

(Sources: Scientific American, Fortune, Engadget)



Follow this link (<http://goo.gl/vCIIr7>) to see videos about the braking and levitation systems.

Sudden Oak Death strikes USA

by Violet Wallerstein
Web Editor

Over a million trees have died in California alone due to Sudden Oak Death and the disease is affecting forests nationwide with the most damage occurring along the west coast. This disease is caused by a water mold named Phytophthora ramorum that destroys trees, most often by causing trunk cankers or large openings in the trunks of trees that drain them of sap and water. This mold is attracted to cool, wet, climates which made the California coast a perfect location. Sudden Oak Death, as the name implies, mostly affects oak and tanoak trees, but can also destroy shrubs and other foliage as well.

There is no current "cure" for this pathogen, so every plant that becomes infected quickly dies, leaving many forests decimated. The only way to prevent the spread of this disease is to cut down infected trees.



DEADLY DISEASE: The disease drains the trees of water.

Currently, over 1,500 square kilometers of forest have been affected by this pathogen and it is predicted that, without further control by 2030, this area could grow to ten times that size.

However, measures to prevent the spread of Sudden Oak Death are almost completely futile as the epidemic is now so widespread. Research led by Nik Cunniffe from the University of Cambridge states that Sudden Oak Death could have been contained if prevention measures began in 2002, but now it would be nearly impossible to accomplish. The cost of such a project would be over 100 million dollars and not come close to stopping the spread of the disease, but rather slightly contain it. While national or even statewide processes may not be feasible, it is still possible to work to contain the disease on a local level and prevent certain areas from being infected.



FUTURE: Cambridge researchers predict more destruction.

Widespread dead trees means a forest fire could spread rapidly and destroy both the dead and healthy trees and other foliage in a forest and cause even more ecological damage to the area, especially in a time of extreme drought. The death of such a large number of plants is also affecting the conversion of carbon dioxide in a time of global climate change. Without plants to use carbon dioxide, it will continue to build in the atmosphere and contribute to rising temperatures. (Sources: suddenoakdeath.org, The Washington Post, Science Daily)

Controversial transgender "bathroom law" passes in North Carolina

by Jessica Blough
Center Editor

The last few weeks have witnessed a national debate over the rights of transgender people to use the bathroom that matches the gender with which they identify, rather than the gender with which they were born. The debate began after North Carolina Governor Pat McCrory signed House Bill 2, a measure requiring everyone to use the bathroom that matches the gender on their birth certificate. The bill was an attack on the transgender community, though conservatives have defended it as a preventative measure against sexual assault.

McCrory signed House Bill 2 into action on Mar. 23 with approval in the State House and Senate, though many Senate Democrats walked out in protest. The so-called "antidiscrimination law" excludes the LGBTQ+ community from legal protection, and includes the "Bathroom Bill." The law immediately met with criticism from both inside and outside the state, including from Caitlyn Jenner and Charlotte Mayor Jennifer Roberts. Roberts stated that the bill was "the most anti-LGBT

legislation in the country." However, McCrory and other North Carolina Republicans continue to defend the bill as a protector of privacy. House Bill 2 also prevents individual cities and counties in North Carolina from passing their own nondiscriminatory acts in defiance of the bill. It follows South Dakota, Georgia, and Tennessee's failed attempts at a bill to ban transgender people from using the bathroom corresponding to their gender identity.

The Bathroom Bill faced huge protests from the evening of its passage, and has escalated into banned travel, the removal of business, and federal lawsuits. Within a week, New York Governor Andrew Cuomo banned all nonessential travel to North Carolina, which includes all trips paid for by taxes. Cuomo's announcement followed nearly identical ones by San Francisco, Seattle, and New York City. Additionally, after the law's passage, PayPal rescinded its promise to develop an operating center in North Carolina, withdrawing over 400 job opportunities. In response to the bill, Target announced that it would allow employees and customers to use whichever bathroom corresponded with their gender identity, regardless of the state law. Over 100 other businesses have expressed their disapproval of the bathroom bill. In less than a month, Bryan Adams, Bruce Springsteen, Ringo Starr, Pearl Jam, and Ani DiFranco all cancelled their North Carolina concerts in protest. As the sixth most-visited state in the nation, these lost cultural events for North Carolina's tourist economy could foreshadow economic instability in the wake of the bill.

Tensions over the Bathroom Bill reached their peak when the federal government demanded that North Carolina change the law, prompting the North Carolina government and the federal government to sue each other. On May 4, the federal government issued a formal



BANNED TRAVEL: Governor Andrew Cuomo banned nonessential travel to NC.

warning to McCrory, stating that House Bill 2 violated civil rights laws for transgender people, including workplace discrimination laws. The federal government demanded action by May 9, prompting McCrory to file a lawsuit against the Justice Department for "a baseless and blatant overreach." Attorney General Loretta Lynch and the Justice Department responded with their own lawsuit directed at North Carolina, for violating Title VII of the Civil Rights Act and Title IX of the Education Amendments. Title VII prohibits workplace discrimination, while Title IX prevents sex discrimination in educational services. By May 13, the Obama administration issued a directive to all American public schools, demanding that they allow transgender students to use the bathroom of the students' choice. Schools who fail to do so could face more lawsuits or loss of federal funding. (Sources: NY Times, CNN, NPR)



HOUSE BILL 2: North Carolina Governor Pat McCrory signed the bill into law.