



The Rochester Computer Society, Inc. a computer/tech club open to everyone



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Our Club

RCSI is a nonprofit 501(c)(3) group open for membership to anyone interested in computers and new technology. Established in 1981, our aim is to provide an exchange of information between users of digital devices. We are not in any way affiliated with any computer manufacturer or software company, and **we do not sell your data or email address.**

Program Meetings

No admission fee for non-members. Everyone is welcome! Second Tuesday of every month, **except July and August**, from 6:30pm-8:30pm.

Help's Half Hour (Q & A) 6:30pm – 7:00pm. *Members and Guests are welcome to attend and bring their computer related questions with them to get answered. Yes, you may bring the problem computer with you.*

7:00 – 7:10, Club Business

7:10 – 8:30+, Main Presentation
Come and join in the fun and enjoy a snack! **You are welcome to bring a guest.**

Sep 10, 'Secure Browsers', 'Cellular Agriculture', 'Flying Cars', presented by Tony Dellelo

Oct 8, 'Cybersecurity', annual security presentation by Bob Gosticha, via Zoom

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All You Need To Know To Secure Your Data From Phishing By Deniz Tutku, April 8, 2024

Phishing measures are becoming increasingly necessary as hackers attempt to steal your personal information and funds online every day. According to a recent report by Scam Sniffer, in February, about 57,000 victims suffered losses of around \$47 million due to crypto phishing scams. They pointed out that "most victims were lured to phishing websites through phishing comments from impersonated Twitter accounts." Therefore, to avoid falling into the hands of fraudsters, you need to be able to recognize phishing and know how to protect yourself and your money. In this article, we will discuss this in detail.

Become a Member

The club would like to have you as a member, and your subscription will help to keep us going. Go to our website, www.rcsi.org, and download a printed form for use by the Post Office mail, **or** enter your info online and pay with a credit card or PayPal, **or** attend a meeting.



"Your Computer User Group of the Air", Saturdays from 12:00 pm to 2:00 pm, with Nick Francesco, Dave Enright, and Steve Rae. Broadcasting on JAZZ 90.1 FM (WGMC) from Rochester, NY. Call 966-JAZZ (585-966-5299) or 800-790-0415,

www.jazz901.org

Sound Bytes is the longest running computer call-in show in the known universe.

We have stopped printing the Monitor newsletter.

Digital copies can be emailed or obtained from www.rcsi.org or my Pcloud storage at <https://tinyurl.com/tonydel-rcsi> (***this link works in PDF version only***). Also includes presentation slides, **past newsletters dating back to 1996** and articles too large for this newsletter.

Some Past Presentations:

- Autonomous Cars and Robots
- Open Source and Free Software
- Protecting Your Identity
- Tablets, the Programs and Uses
- Personal Finance Software
- Amazing Browser Tips
- Linux is Like Cars
- Drones and Their Many Uses
- Gifts and Gadgets for the Holidays
- Cut the Cord, Streaming Services
- 3D Printing, ENABLE project
- Features, Mac OS X & Windows
- The New Space Race, 2021
- Tech of South America
- Internet Security and Privacy
- AI and Digital Assistants
- Emerging Technologies
- My Favorite Android Apps

Latest Hacker Attack On Exchanges

Cybersecurity company Lookout has announced the disclosure of a new phishing tool called CryptoChameleon. This tool demonstrates a new tactic aimed at some cryptocurrency exchanges such as Binance, Gemini, Coinbase, as well as the US Federal Communications Commission (FCC) via mobile phones. Attackers can create copies of single sign-on (SSO) pages and then use a combination of email and voice calls to obtain user data.

The report notes that CryptoChameleon has attacked employees of the Federal Communications Commission and Binance. In addition, users of Binance, Gemini, ShakePay, and other exchanges were affected. CryptoChameleon uses phone numbers and websites that look legitimate and represent the company's support service in Gmail, iCloud, Outlook, X, and other services.

Lookout reported that they were able to speak to some of the victims and confirm that a combination of phone calls and messages were used to force the victim to complete the process.

"In one scenario, a victim received an unsolicited phone call that spoofed a real company's customer support line. The person on the other end of the line was the threat actor, but sounded like a member of the support team from that company." Hackers informed the user that their account had been hacked, but they would help them restore it. During a phone conversation with the victim, the attackers would send a message that redirected to a phishing page.

The company's analysis revealed more than 100 successful phishing attempts and ongoing phishing activity, mostly on Hostwinds, Hostinger, and Russian RetnNet servers. The vast majority of victims are located in the United States.

How Do I Recognize Phishing?

The main goal of phishing is to obtain confidential user information. Attackers commonly send emails with malicious links on behalf of websites or exchanges. These can be security warnings, account hacking, various surveys, etc. Fraudsters usually emphasize the urgency of action or attract attention by offering a large reward for participation.

Signs that may indicate that the email is fraudulent:

- The message uses subdomains, misspelled URLs
- The message is written in a way that instills fear or a sense of urgency.
- The email asks you to confirm personal information, such as financial information or a password.
- The message is written illiterately and contains spelling and grammatical errors.

There are other verification methods used by companies such as Binance, WhiteBIT, and KuCoin, which have an additional way to

APCUG, An International Association of Technology and Computer User Groups

<https://apcug2.org/>

Saturday Safaris

Exploring Technology in Depth
Saturdays:
12 pm – 2 pm EST

<https://apcug2.org/saturday-safaris/>

Tech for Seniors

<https://www.techforsenior.com>

hosted by Ron Brown and Hewie Poplock
Every Monday from 9-10 AM PT, (12-1 PM ET)
Broadcast with Zoom
The meeting ID is **526-610-331** (there is no password) and you'll be placed in a waiting room and then admitted.

###

APCUG Website Help

Windows & Android Tips:

By Judy Taylour

<https://apcug2.org/jejestips/>

Apple Tech Tips:

<https://apcug2.org/50-best-mac-tips-tricks-timesavers/>

Penguin Platform (Linux):

<https://apcug2.org/penguin-platform/>

Chromebook Tips And Tricks:

<https://apcug2.org/chromebook-tips-and-tricks/>

verify the authenticity of an email with the Anti-Phishing feature. After activating it, the user has to enter a custom code that will signal that the email came from these companies. After saving the code, every time the user receives a technical email from the exchanges, it will contain this code.

How To Avoid Phishing Scams?

Use strong passwords and enable two-factor authentication: Use a strong and unique password for all accounts (*recommended minimum of 12 characters*). Don't write them down in an easily accessible place or share them with others. For storing and managing complex passwords, it's best to use a password manager, such as 1Password, LastPass, Dashlane, and others. Enable two-factor authentication for all accounts to provide an extra layer of security. To do this, you can install a 2FA app on your phone, such as Google Authenticator, Authy, 2FAS, etc.

Don't ignore update notifications: Security patches and updates are released primarily to address current cyberattack techniques, closing security gaps. Set your software to update automatically to avoid new threats.

Check the website address before entering your information: The URL of a page can often differ from the domain by a single letter and sometimes by case. For example, l-l, I-l (uppercase "i" and lowercase "l"). It is also not recommended to enter passwords and logins on websites without HTTPS (a lock icon next to it)-it protects the connection and encrypts data.

Do not click on suspicious links: Commonly, scammers use links about winning millions of dollars or gifts as a lure. Therefore, do not click on such links and always check all current sweepstakes and company events.

Summary

Understanding phishing schemes and their signs is the most important thing in the fight against this type of fraud. By knowing how to recognize harmful attacks and what methods attackers use, users can better protect their personal data. And by following the above recommendations, they can reduce the likelihood of theft.

END OF ARTICLE



<https://mooselakecartoons.com>

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Planning Meeting

Held on 1st Tuesday of each month at 7 pm, * * ONLINE * *. We will be using Zoom. ANY CLUB MEMBER MAY ATTEND.

Monitor Newsletter

The Monitor is published monthly by members of RCSI. Articles by our members may be reprinted by other user groups or nonprofits, without special permission. A courtesy copy may be emailed to the author or Monitor editor. Limited copies (probably in black and white) will be printed and available at our meetings.

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Another Day. Another Scam. Don't Fall for it.

By Kurt Jefferson, Editor
Central Kentucky Computer Society

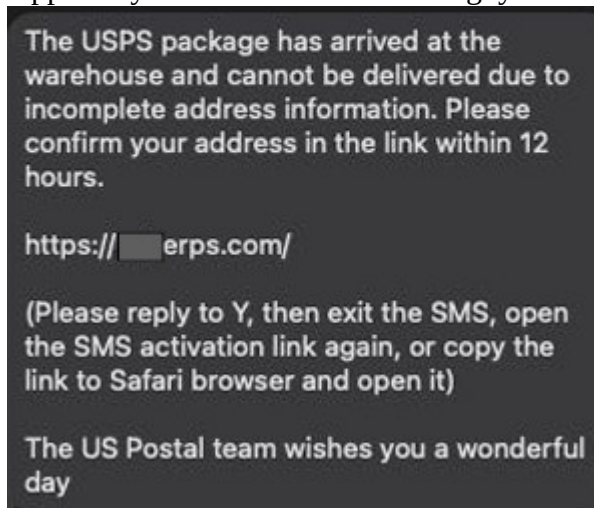
I wonder how many Americans this very minute are being taken for a ride and giving away their personal information to a criminal. You might be surprised. At all hours of the day, people are turning over credit card numbers and more to thugs.

As Aura writes, "When Mary Anne May received a text from UPS on the day after Mother's Day, she assumed a family member sent her a gift that she wasn't home to receive. But when she clicked on the link in the text to reschedule the delivery, and was asked for her credit card number, she started to get suspicious.

While Mary Anne's caution was well-founded, millions of Americans have fallen victim to package delivery scams like this one."

In recent days, I've received a number of bogus text messages on my phone. I simply report them as junk and delete them.

Here's an example. The bogus text message alerts me that the US Postal Service is holding a package at its "warehouse" and cannot deliver it because it lacks complete street address details. Look who supposedly sent the text. It's from a guy named Dylan. This is the first



red flag. Think about it. USPS will never text you using a bogus email address starting with "dylan." Second, the letter carrier has been delivering mail and Amazon packages to my house for years. USPS doesn't have my address? Then who's the guy who's been delivering junk

mail to my mailbox for years?

Third, the USPS doesn't have "warehouses." They don't use that phrase. The USPS has distribution centers. And I'm very glad to know that the bogus US Postal team is wishing me a wonderful day! Finally, the USPS doesn't use bogus web addresses, as shown in the text. A legitimate message would read usps.com or something similar.

If I click on the link shown in the text, I'll get a website where I can easily enter my credit card number to be scammed by Dylan or whoever is trying to turn me into a victim. Hey Dylan, have a wonderful day!

Reprinted from <https://newsite.ckcs.org/>,
lextown77@mymetronet.net.

Tidbits of probably useless information

In an attempt to prevent the **Bubonic plague** from spreading back in Shakespeare's time, many public places were shut down until things improved. That's why theaters were closed in Jan. 1593 and didn't reopen until the spring of 1594. This closure meant that playwrights like **William Shakespeare** were temporarily out of work and that is when he spent his time [writing poetry](#) instead of focusing on his famous plays. It's likely when he began his 154 sonnets.

The former **George Garratt** is believed to be sporting the longest name in the world, officially becoming this: "Captain Fantastic Faster Than Superman Spiderman Batman Wolverine Hulk And The Flash Combined." Back in 2008, he told the Telegraph newspaper in the U.K. that he simply wanted to be "unique" and decided to use superheroes as his theme.

Would you believe even **Queen Elizabeth II's** cows enjoy a life of luxury. The monarch's 165 dairy cows spend much of their time snoozing and relaxing on waterbeds, said **Mark Osman**, the manager of the royal's farm at Windsor Great Park, in an episode of [BBC's Countryfile](#). "As the cow lies down, the water pushes underneath the pressure points where the cow lies, and the cow ends up floating," he said.

* * * * * SOFTWARE and HARDWARE * * * * *

Exploring Linux, A Backup Solution for Linux Systems

By Alan German, Treasurer
Ottawa PC Users' Group, Ontario, Canada

While several disk imaging programs are available to back up Linux systems, very few feature a graphical user interface (GUI). Foxclone is one of the exceptions. Furthermore, it is open-source software with two major features that make it worthy of further examination.

Foxclone can be downloaded in two versions, each providing an ISO file. One version, labeled as standard, is based on Ubuntu Linux Version 18.04 (Bionic Beaver). The focal version is based on Ubuntu Linux Version 20.04 (Focal Fossa).

I selected the most recent version and installed the ISO file on a multi-boot USB drive using Yumi (<https://pendrivelinux.com/yumi-multiboot-usb-creator/>). Foxclone isn't supported directly in Yumi, so it is necessary to select *Try an Unlisted ISO* as the source for the ISO file. Once the relevant files have been copied, the USB can be booted, and Foxclone is listed in the boot menu under the category *Unlisted ISOs* as the file *foxclone51_focal.iso*.

Booting from this menu item loads a Linux desktop that includes icons for Foxclone and the Fox guide user manual: a file manager and a web browser. The Linux panel (equivalent to the Windows taskbar) is displayed across the bottom of the screen, with a button to access the main menu in the lower-left corner. The options available are more limited than those for a full Linux distro. However, they still include applications such as a text editor, PDF reader, Terminal, and the GParted partition editor.

Running Foxclone displays the main program window with sections where the drive is to be backed up, its partitions, and the destination drive and partition, which can be selected for the backup process. The program scans the computer's filesystem and populates the entries for the source and target drives. Consequently, the backup drive must be present when Foxclone is initiated so that it can be displayed as being available as a target.

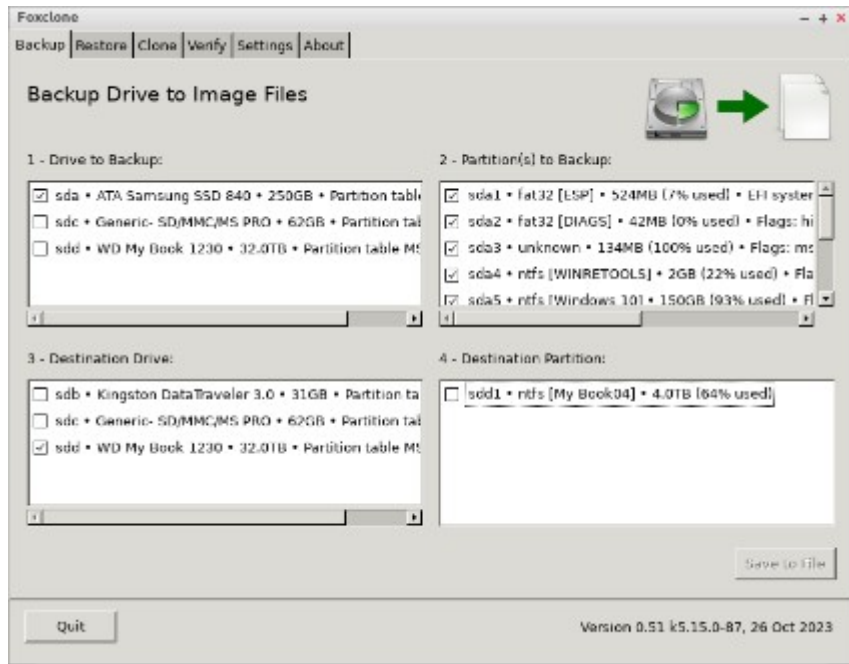
... Intentional Blank Space ...

Windows & Android Tips by Judy Taylour

MAKE YOUR PHONE LAST LONGER WITH THESE EASY TIPS – Your phone can last for years if you treat it properly. These tips will help whether you have an iPhone or Android phone. [Make Your Phone Last Longer With These Easy Tips – CNET](#)

HOW TO REMOVE YOUR PERSONAL INFORMATION FROM GOOGLE SEARCH – Looking for more privacy? Here's how to remove your phone number, email, physical address, and lots of other personal data about yourself from Google's search results. [How to Remove Your Personal Information From Google Search | PCMag](#)

HOW TO RESET WINDOWS 11 WITHOUT LOSING YOUR APPS, FILES, AND SETTINGS – Windows 10 and 11 offer a reset feature that you can run if you're bumping into technical troubles with the operating system. But there's a downside to performing a traditional reset. All your installed applications and customized settings are lost, forcing you to reinstall and set them up from scratch, even if the reset fixes the problem. With Windows 11, however, there is another option. Find out more at [How to reset Windows 11 without losing your apps, files, and settings | ZDNET](#)



Once a drive to be backed up has been selected, all the partitions on this source drive are automatically selected for backup. Still, individual checkboxes allow the selection to be refined. Selecting an external USB drive as the destination drive and pressing *Save to File* brings up a second dialogue box where the target location can be further specified by browsing the drive's file system. Other options are to create a backup folder and overwrite the current date (in the format 20240215) as the default prefix for the names of the backup files.

A final dialogue box requests confirmation of the backup selections, and pressing *OK* starts the backup process. The result is essentially a series of compressed image and text (log) files that relate to the contents of the individual disk partitions (identified here as sda1, sda2, etc.)

Restoring a disk image or partition is essentially the reverse of the backup process and is accessed through the *Restore* tab at the top of the program window. Other tabs provide options to clone disks, verify backups, and change various program settings. An *About* tab indicates the software version and its release date, together with a notice that the program is free software under GNU General Public Licence (GPL) terms.

The Foxclone User Guide (63 pages) can also be downloaded from the developer's website. The manual provides clear, detailed instructions about every aspect of using the program, with the text illustrated using annotated screenshots. Documentation is even provided on the utility programs (image viewer, text editor, etc.) provided in the distribution, with overviews of disk partitioning and bootloaders.

Telegram Founder Pavel Durov Is Not a Free-Speech Martyr

By [Matthew Gault](#) Published August 29, 2024

The CEO's arrest in France raises many questions about how to police the Internet, but it's not about free speech.

Telegram's legal battle in France has been a long time coming. Pavel Durov, Telegram's founder, has long thumbed his nose at authorities and is famously uncooperative when governments ask the app to take down posts or share information about its users.

French authorities indicted Durov on [six different charges](#) including complicity with the dissemination of child sexual abuse material, drug trafficking, and organized crime. Paris is, essentially, attempting to punish Durov for the nasty things that take place on Telegram.

Bad stuff happens on all social media networks. People buy and sell drugs on Facebook. Terrorists recruit on Instagram. Thieves plan crimes on TikTok. The difference is that the people running those companies often, but not always, cooperate with authorities when they ask for help tracking down a terrorist, drug dealer, or child abuser. Telegram, famously, does not... most of the time.

Read the rest on Gizmodo, <https://gizmodo.com/telegram-founder-pavel-durov-is-not-a-free-speech-martyr-2000492567>.

Foxclone supports both Linux and Windows, runs from a bootable USB drive, is intuitive, and has excellent documentation. The program runs a Linux distro as a live USB, and while this won't be an issue for Linux users, even those familiar only with Windows will know to double-click the Foxclone icon on the desktop to run the program. The user interface is simple, and the backup process is easily understandable, so running this software is worth a try.

Article is reprinted from <https://opcug.ca>, Editor: briggittelord@opcug.ca.

Can Two Files Have the Same Name?

By Jim Cerny, 1st Vice President
Sarasota Technology Users Group

It was the usual family gathering. And, as usual, Uncle Backup and Aunt Fowler were arguing. They both use Windows computers, and both save files into folders. Uncle Backup said, "NO, of course not; you cannot have two files with the same name; Windows won't allow it!"

"Oh, don't be silly," said Aunt Fowler. Of course, you can. I do it myself whenever I copy a file—it copies it with the same name!"

Well, dear reader, who's right? This is a great trick question to bring up over beverages whenever you are in a tech discussion with friends.

The answer? Well, the answer is they are both right! Well, sort of. Fortunately, their argument was overheard by the good doctor, Doc Ewewmint.

"May I help you?" interrupted the good doctor, "Yes, you CAN have two files with the same name if they are in different folders! Let me explain. If you copy a file to a different folder, it can have the same name. But now you must remember carefully which folder you put it in. If you change one of the files but not the other, even if they have the same name, they will now be different."

"Oh, that could cause trouble," said Aunt Fowler, "so when I copy my files to back them up on a different device, I name the folder "Backup" and the date or something. That way, I know they are not the ones I actively use and change daily. I am thankful that Windows keeps track of the date of each file."

It happens that Aunt Fowler's husband also overheard the discussion. "Well," he said, "that's all true, of course, but you can have two files that appear to have the same name in the same folder – but they would be of different file types! You could have a word processing document file created in Word, for example, and another with the same name created by Word Pad. They would have different file types -- ".docx" (or ".doc" for Word) or ".rtf" (for WordPad) -- but other than that, they could have the same name."

"That's because the file type is part of the name!" said Aunt Fowler. "My husband is so right about that."

Virtual Tours

Take a virtual tour of the **Giants Causeway** (Northern Ireland)

<https://www.nationaltrust.org.uk/giants-causeway/features/take-a-virtual-tour-of-the-giants-causeway>

Ireland; **Cliffs of Moher** virtual tour

<https://www.cliffsofmoher.ie/virtual-visit-tour/>

Italy; Download the Goole Arts & Culture app and immerse yourself to the **Uffizi Gallery**

<https://artsandculture.google.com/partner/uffizi-gallery>

One day in **Dubai**

<https://samsungvr.com/view/84LGDvmAxEP>

Turkey; Plan your trip to **Istanbul**

<https://samsungvr.com/view/24LddCidjNc>

Croatia; Would you try cliff jumping?

<https://www.youtube.com/watch?v=xiGZfFKFWfU&feature=share>

“Yes,” said the good doctor, “and the computer keeps all this straight. The computer recognizes the folder path to get to the file you want because you can have the same file name (even with the same file type or extension) in different folders. You could say that the “path” of the folders to get to the file is also part of the file name. Thus, you can never have two files with the same name!”

Well, I’m glad we all settled that and agreed! Now, should I use “Save” or “Save as”?

I reprinted this article from the newsletter of <https://thestug.org/>, JimCerny@gmail.com.

Pack Your Bags!

by Lynda Buske
PC News (June 2023)

As you already know, one of my interests is travel photography, and we are entering the season when many of us travel far (or near) to experience and photograph new locations. A stay at an area B&B or a friend's cottage can provide ample opportunity to enjoy a different life from your normal routine. Perhaps you have time to notice nature's beauty when the pace is slower and your schedule is not so packed. Maybe you also have the chance to view familiar things from a different perspective. Finding beauty that others walk by is a comment I often hear with respect to my photos.

I have often written about travel photography, so here are some links to past articles you may find useful.

Tips for travel photography. Review my five tips for better travel photos.

<https://opcug.ca/Photography/TipsForTravelPhotography.pdf>

Rainy day photos. Don't spend vacation days inside when rainy days offer enticing photographic opportunities.

<https://opcug.ca/Photography/RainyDayPhotos.pdf>

Shooting near water. Canadians have abundant opportunities to visit lakes and seashores, so review these tips before heading to the beach!

<https://opcug.ca/Photography/ShootingNearWater.pdf>

Don't miss the road shots! Don't miss photo opportunities from the passenger seat or on a bus.

<https://opcug.ca/Photography/RoadShots.pdf>

What to do with all those travel photos? How to organize your pics once you are home. Please note that the article refers to Shutterfly.com. As of March 2023, setting up a personalized site for sharing on Shutterfly is no longer an option. I would suggest trying a

Penguin Platform

By “Free John” Kennedy

CLAPPER IS OUR FAVORITE MEDIA PLAYER FOR LINUX – Can’t find an open-source media player that perfectly fits the aesthetic of your Linux system? Try Clapper! It’s an open-source, modern media player that complements your GNOME system and provides all the necessary features of a media player. Explore the features of Clapper in this article to understand why you should at least try this media player once. [Clapper Is Our Favorite Media Player for Linux. Here’s Why – Make Tech Easier](#)

NEW FEATURE – Linux Mint 21.3 is a long-term support release that will be supported until 2027. It comes with updated software and brings refinements and many new features to make your desktop experience more comfortable. Learn more at [New Features in Linux Mint 21.3 ‘Virginia’ – Linux Mint](#)

site like Flickr, where you can post 1000 free photos and provide links to friends.

<https://opcug.ca/Photography/WhatToDoWithAllThoseTavelPhotos.pdf>

Happy travels!

Reprinted from Ottawa PC Users' Group, Ontario, Canada
(<https://opcug.ca>), Editor: brigitte@opcug.ca.

***** BITS and PIECES in the NEWS *****

Editor’s Note: To continue reading the following articles, you may copy the long URL at the end of the article and enter it into a web browser **or** click on the URL in the PDF or web versions of this newsletter.

If We Want to Settle on Other Planets, We’ll Have to Use Genome Editing to Alter Human DNA

By [Sam McKee](#), July 23, 2024

Manchester Metropolitan University

When considering human settlements on the Moon, Mars and further afield, much attention is given to the travel times, food and radiation risk. We’ll undoubtedly face a harsh environment in deep space and some thinkers have been pointing to genome editing as a way to ensure that humans can tolerate the severe conditions as they venture further into the solar system.

In January, I was fortunate to attend a [much-anticipated debate](#) between astronomer royal [Lord Martin Rees](#) and Mars exploration advocate [Dr Robert Zubrin](#). The event at the British Interplanetary Society took on the topic of whether the exploration of Mars should be human or robotic.

In a recent book called *The End of Astronauts*, Lord Rees and co-author Donald Goldsmith outline the benefits of exploration of the solar system using robotic spacecraft and vehicles, without the expense and risk of sending humans along for the ride. Dr Zubrin supports human exploration. Where there was some agreement was over Rees’s advocacy of [using gene editing technology](#) to enable humans to overcome the immense challenges of becoming an interplanetary species.

Genes for extremes

Tardigrades are microscopic animals sometimes referred to as “water bears”.

Experiments have shown



* * Jokes & Quotes Stolen from Everywhere * *

JOKES ABOUT AGING

Aging gracefully is a nice way of saying you're slowly looking worse.

At my age, the only pole dancing I do is while holding on to the safety bar in the bathtub.

I'm getting older and wider instead of older and wiser.

Allow me to politely suggest that this be the year you start lying about your age.

What's worse than middle age? Knowing you'll grow out of it.

Old people are just young people who have been alive for a very, very long time.

You know you're getting old when your doctor refers you to an archaeologist.

What's the key to a structured retirement?
A rigid nap schedule.

If I ever decide to buy a horse ranch in my old age, I'm going to name it "Pasture Prime."

Why was the retiree's wife tired?
She got twice as much husband for half the pay.

Retirement is wonderful. It's doing nothing without worrying about getting caught.

My company recently gave me an aptitude test, and I found out the work I was best suited for was retirement.

that these tiny creatures can tolerate extreme temperatures, pressures, high radiation and starvation. They can even [tolerate the vacuum of space](#).

Even more intriguing is whether inserting tardigrade genes into our own genome could make us more resilient to the harsh conditions in space. Scientists have already shown [that human cells in the lab](#) developed increased tolerance to X-ray radiation when tardigrade genes were inserted into them.

You can read the whole article on <https://theconversation.com/if-we-want-to-settle-on-other-planets-well-have-to-use-genome-editing-to-alter-human-dna-235030>.

Eco-Friendly "Living Plastic" Contains the Seeds of its Own Destruction

By [Ben Coxworth](#), August 23, 2024

When the going gets tough for certain bacteria, they form into spores that can withstand the harshest of environments. Scientists have now utilized that fact to produce "living plastic" that biodegrades – but only under specific conditions.

Spores are a dormant form taken by some types of bacteria, typically when nutrients are in short supply. They are protected by a tough outer coating that allows them to survive high temperatures, high pressure, desiccation, and caustic chemicals. This makes them one of the most resistant of all life forms. They are able to remain in an inactive state for years or even centuries at a time, becoming active again only when triggered by the right environmental cues.

Some bacteria are also known to [break down plastic waste](#), keeping it from persisting in the environment. Scientists from the Chinese Academy of Sciences have now taken spores of such bacteria and embedded them in solid plastic, which remains tough and intact until the spores are revived.

Tests showed that the resulting "living plastic" performed similarly to regular PCL during daily use. When a certain enzyme was applied to the surface of the plastic, however, it eroded the surface of the material and revived the spores encased within. The reanimated bacteria proceeded to start secreting lipase BC again, completely degrading the plastic within six to seven days.

A paper on the study was recently published in the journal [Nature Chemical Biology](#).

Source: [Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences](#)

Reported by <https://newatlas.com/bacterial-spores-degradable-living-plastic/>.

Odds and Ends

[David Webb](#)

08/26/2024

A troubling study has found that our brains may attract more microplastics than any other organ, making them especially vulnerable.

Microplastic pollution is a growing environmental threat, present not only in ecosystems but also in our bodies. A recent study published in the National Library of Medicine reveals that **this build up in our brains is far worse than previously thought.**

Researchers discovered that **our brains contain significantly higher levels of microplastics than other affected organs**, raising concerns about the potential impact on brain and cognitive health.

The study, led by Professor Matthew Campen of the University of New Mexico, analyzed 91 human brain samples from autopsies. The bad news: **every sample contained microplastics.** Even more alarming, the concentration of these particles was 10 to 20 times higher in the brain than in the liver or kidneys.

Ouch! Read the rest at <https://ccm.net/apps-sites/13431-our-brains-are-full-of-microplastics-and-that-s-a-serious-problem/>.

Robots With Self-Healing 'Living Skin' Make Them Look More Human

Kareen Liez Aug 12, 2024

In a major leap forward for robotics, scientists have created a self-healing “living skin” that could give robots the appearance of being more human and less mechanical. This ground-breaking approach involves using cultured skin cells and new ways of attaching them, which may enable future robots to be wrapped in realistic, self-regenerating skins.

The results were published on June 25th in [Cell Reports Physical Science](#), revealing that this artificial skin looks like human skin and can heal itself from minor damage.

The new skin is layered over a robot and treated with water-vapor plasma to make the surface hydrophilic, hence allowing better adherence of gel from cultured skin. This innovative method prevents sagging or detachment – common problems with older designs.

Future Prospects and Challenges

Shoji Takeuchi, one of the lead researchers in the study from the Institute of Industrial Science at the University of Tokyo, talked about several hurdles to overcome before this technology can become extensively applicable. For instance, to improve the durability of cultured skin, the need for stable nutrition supply and moisture, as well as integrated perfusion systems, must be developed. Furthermore, the mechanical strength of the skin should be increased up to that observed in natural human skin.

Reported in

<https://www.sciencetimes.com/articles/51291/20240812/self-renewing-living-skin-approaches-human-realism-robots.htm>.

New Gels Could Protect Buildings During Wildfires

Stanford University, News Release 22-Aug-2024

During a test on plywood, researchers showed how the new gel transitions from a hydrogel to an aerogel under heat from a gas hand-torch. The torch burned at a much higher temperature than would result from a wildfire.

Andrea d’Aquino (picture credit)

As climate change creates hotter, drier conditions, we are



seeing longer fire seasons with larger, more frequent wildfires. In recent years, catastrophic wildfires have destroyed homes and infrastructure, caused devastating losses in lives and livelihoods of people living in affected areas, and damaged wildland resources and the economy. We need new solutions to fight wildfires and protect areas from damage.

Researchers at Stanford have developed a water-enhancing gel that could be sprayed on homes and critical infrastructure to help keep them from burning during wildfires. The research, [published](#) Aug. 21 in *Advanced Materials*, shows that the new gels last longer and are significantly more effective than existing commercial gels.

“Under typical wildfire conditions, current water-enhancing gels dry out in 45 minutes,” said [Eric Appel](#), associate professor of materials science and engineering in the [School of Engineering](#), who is senior author of the paper. “We’ve developed a gel that would have a broader application window – you can spray it further in advance of the fire and still get the benefit of the protection – and it will work better when the fire comes.

After that initial success, it took several years of additional engineering to optimize the formulation. It is now stable in storage, easily sprayable with standard equipment, and adheres well to all kinds of surfaces. The gels are made of nontoxic components that have already been approved for use by the U.S. Forest Service, and the researchers conducted studies to show that they are easily broken down by soil microbes.

“They’re safe for both people and the environment,” Appel said. “There may need to be additional optimization, but my hope is that we can do pilot-scale application and evaluation of these gels so we can use them to help protect critical infrastructure when a fire comes through.”

This article was reported on <https://www.eurekalert.org/news-releases/1055470>.

CLUB and REGIONAL NEWS

Vacation is over and we need an alternative to Zoom that most can agree on using. We need this by October 1st. We need a program that is reasonably easy to use and FREE. Someone could also look into setting up a Youtube channel. Let’s brainstorm.

Got Questions?

Send an email to either person below and they will get back to you. The questions can be related to the OS (Operating System) or hardware related issues. Please give them time for a response, as they do this service on a volunteer basis. Thank you.

Windows OS: Arpad Kovacs, podcomputer@gmail.com

Linux & some Mac: Carl Schmidtman, unixgeek@faultline.com

Our Meeting Place
St John’s Meadows at
Johnsarbor Drive, is on the left,
past Clinton Avenue, when
going West on Elmwood
Avenue. The opening in the
white fence is Johnsarbor
Drive. At the ‘T’, turn right.
The meeting is in the SECOND
building on the left –
Chestnut Court.

www.rcsi.org