

#BED-TIME

Getting Outside Could Improve Your Sleep

Our bodies have a natural circadian clock that tells us when to go to sleep at night.



Getting outside during the day, even when it's cloudy, may benefit your sleep, research with college students suggests.

As reported in the Journal of Pineal Research, the study finds that University of Washington students fell asleep later in the evening and woke up later in the morning during of all seasons-winter, when day-light hours on their Seattle campus are limited and the skies are notoriously overcast.

The team behind this study believes it has an explanation: The data show that in winter students receive less light exposure during the day. Other research has indicated that getting insufficient light during the day leads to problems at night, when it's time for bed.

"Our bodies have a natural circadian clock that tells us when to go to sleep at night," says senior author Horacio de la Iglesia, a professor of biology. "If you do not get enough exposure to light during the day when the sun is out, that 'deletes' your clock and pushes back the onset of sleep at night."

The study used wrist monitors to measure sleep patterns and light exposure for 507 undergraduate students from 2015 to 2018. Data indicated that students were getting roughly the same amount of sleep each night regardless of season. But, on school days during the winter, students were going to bed on average 35 minutes later and waking up 27 minutes later than summer school days.

This finding surprised the team, since Seattle-a high-latitude city-receives nearly 16 hours of sunlight on the summer solstice, with plenty of evening light for social life, and just over eight hours of sunlight on the winter solstice. "We were expecting that in the summer students would be up later due to all the light that's available during that season," says de la Iglesia.

Based on student sleep data, the researchers hypothesized that something in winter was "pushing back" the students' circadian cycles. For most humans, including college students, the innate circadian cycle governing when we wake and asleep runs at about 24 hours and 20 minutes-and is "calibrated" daily by input from our environment. For the students in the study, sleep data indicated that their circadian cycles were running up to

"Gp Capt Chandan Singh now asked Sqn Ldr Sultan to design an emblem to be painted on the armed helicopter. He also asked them to give it a name and number. This created a lot of excitement and animated discussion among them. Finally they decided that the helicopter's vertical stabilizer is to be painted with a red roundel having a map of East Pakistan superimposed on it in green colour. Also the call sign would be EBR for East Bengal Rifles. Gp Capt Chandan Singh approved and the armed Chetak donned Bangladeshi colours. I believe it was the first for Bangladesh Air Force! In all my subsequent log book entries IAF serial no 364 stands changed for EBR."



Gp Capt Chandan Singh discussed the need of a target to enable us to practice firing the RFs. He came up with the idea of parachutes. I proposed that as some of the neighbouring hill slopes were covered with grass I could hover low over the slope since the high gradient would not permit a landing. From the hover three air-men could jump out with a parachute and fix the parachute on the hill with hammer and nails. I would fly overhead and pick them up once the parachute had been spread and nailed down. Returning to Dimapur a short while later I reported that we had a clear and safe target for day and night firing. I got a prompt go ahead. I was now really enjoying the freedom from rules, regulations and red-tape."

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Sagat leading Niazi to the prisoner of war camp after surrender.

Training The New Army! (...2)

#MEMORIES

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"Another incident is worth mentioning, Flt Lt Ghoshal brought in

an Otter Aircraft with rocket pods mounted under each wing. One of his pupils was Flt Lt Shamsul Alam. On being sent solo one morning Shamsul failed to return beyond his fuel endurance time. The entire camp anxiously waited for his news. He returned a little later after sunset safely. I was told that he flew right over East Pakistan to Calcutta, was given fuel and returned. After dinner the next night Sqn Ldr Sultan loaded his revolver and called Shamsul and they walked off to a dark part of the runway. We feared the worst. In the ensuing hush the



A damaged helicopter with Gen Sagt seated inside.

noise made by the insects sounded deafening. A while later Sultan returned with a chastened looking Shamsul following behind much to our collective relief."

On 2 Dec I flew to Kailashahar but the strike was to be launched from Teliamura which was closer to the East Pakistan border. Here too was located the HQ of IV CORPS commanded by Lt Gen Sagat. Singh whose reputation as a can do leader was widespread. We all believed if anybody could deliver Bangladesh it would surely be him. On the night of 3 Dec Sqn Ldr Sultan along with Flt Lt Alam got airborne with a full load of fuel and rockets. Their checks and procedures were well imbibed which got them to keep their navigation lights on. They were so visible. I got on to the hand held radio set and told them to switch off the lights which they did and immediately became invisible but remaining audible. Their target was Narayanganj fuel depot. Mission was accomplished and the fuel storage tanks along with the fuel was destroyed. The glow from the burning fuel could be seen from the Indian Border fifty kilometers away.

War with Pakistan started on 4 Dec

"Ground attack and close support missions started in right earnest. Gp Capt Chandan Singh was directing my flights and flew with me as passenger from time to time, to gauge the enemy status and our efficacy."

"I flew three missions on the night of 6 Dec. On the first night of

my attack I recalled that the only way I could become aware of coming under fire from the enemy rifles and machine guns was when I looked directly into the flashes from their muzzles. Also the muted thuds that I heard were direct hits on my Chetak and not because of collision with bats. Next morning i.e. 7 Dec I looked at the bullet holes. The bullet had gone through the fragile cowling. There was no armour plating of any kind for the vital engine parts or the pilots and the gunner."

"Also we established helicopter airworthiness norms early. After the bullet holes in the fuselage and the resultant vibration Ramakrishna and his team would do some patchwork then he would ask me "Will you fly the machine?" "Yes," I would say. Then she is serviceable". Despite several bullet holes in the cowling, main and tail rotors we never grounded the helicopters. So much so that army jawans used to come to our camp to look at the flying sieve."

"I flew eleven missions on the 7th Dec, for the first day flight I was given fighter cover. The same day a special heli-borne operations were launched and a battalion of Gurkhas was flown deep into enemy territory and landed close to Sylhet. On landing the helicopters and

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troops came under heavy fire. I expended all my ammunition and came to base to reload and then returned to engage the target. I did this several times. But light was fading and only part of the Battalion had been landed and the troops on the ground were in an intense fire-fight with the enemy and in the dark I was afraid of hitting our own troops. Further sorties were put on hold due to darkness. It was then Group Captain Chandan Singh was threatened."

"A Gurkha Officer approached him and asked why further troop induction was stopped. Gp Capt Chandan Singh explained that night landing was not possible! The officer lost his cool and yelled "My boys are dying. They need reinforcement. Commence flying now" etc etc. Group Captain Chandan Singh explained that night operations would result in more casualties to both his troops and the helicopters but he would not be pacified. Group Captain Chandan Singh told him "There will be no more sorties tonight. You can pull out your pistol



Army para-dropped infantry into East Pak.

World Arabic Language Day

With an estimated 390 million speakers, Arabic is one of the most widely spoken languages in the world. It is also one of the six official languages of the United Nations, as well as the liturgical language of 1.6 billion Muslims. Being one of the only modern languages to be written and read in a right-to-left form, Arabic is a fascinating language with a long history. For all of these reasons and many more, we can all agree that Arabic is more than deserving of its very own day.



Helicopter of kilo flight armed with a machinegun.



Mi-4 helicopters served the Indian Air Force from 1962 to 1983.

and shoot me". With that the officer turned away and we could breathe easy."

"On 16 December 1971, the day of the surrender I flew into Dacca with S/C Choudhury. The airfield was a desolate patch of potholed ground. Things were strewn all over. There was no owner, no security. People were loitering around all over and the Pakistan Army and Air Force which had lorded over the place only a few hours earlier were nowhere to be seen. People were picking up whatever they could as mementoes. What did I take? I picked up a belt of F86 sabre jet cannon shells! At Dimapur it was broken into smaller lengths and shared. We flew back to Agartala at night and chatted till late with a sense of great relief and elation at what we and our comrades in arms in olive greens had achieved. We had removed a big threat to our country by breaking it into half and created a new nation which had never ever existed in the past. We wondered how the political leadership would handle this hereafter, about the direction the new nation would take and its relationship with India."

"On 18 December I was instructed to return my students to Dacca as also to handover the bullet ridden armed Chetak to them and fly back in the other Chetak. We shook hands with Sultan, Badrul, Alam and Shahabudin Ahmed who were now the founding fathers of the Air Force of an Independent Bangladesh and the bullet ridden battle Chetak their first aircraft. Shahabudin wrote his Dacca address on a Pakistani currency note and invited me to his home. I still have that note. Sultan on behalf of the others refused to hand over their carbines. We spent the night in what was till a couple of days ago the PAF officers Mess but now the BAF officers Mess in Dacca."

"Next morning Sultan saw me off with thanks and a case of Scotch! My report about the retention of the carbines was absorbed silently by Gp Capt Chandan Singh. "For our role in the war I was awarded a Vir Chakra and Sultan, a Bir Uttam by the Government of Bangladesh. The first and only time that a crew of one aircraft has been awarded by two nations."

To be continued... | | | | write@arbit@rashtradoot.com

#HAPPENINGS@QATAR

A Rivalry of Past vs Present

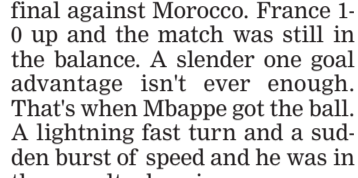


In Russia four years ago, France overcame Argentina (4-3) and Uruguay (2-0). That Argentina game, of course, was the one that announced the thrilling talent of Kylian Mbappe to the world at large. Followers of European football had seen what he could do with Monaco and Paris Saint-Germain (PSG), but this was the first time he had sparked on the world stage. And how Argentina led for nine second-half minutes before Benjamin Pavard's once-in-a-lifetime equaliser but it was Mbappe that buried Messi's dream that day with two goals that showcased his searing pace, strength and clinical finishing.

He has already won a world cup and is on the cusp of another. It is universally accepted that he is the future. Someone who will dazzle the world and win many more accolades for his country. The presence of Kylian Mbappe on the pitch is in itself a cause of excitement. Each time the ball gets to him, there is a sense of something extraordinary happening. Take the semi-

final against Morocco. France 1-0 up and the match was still in the balance. A slender one goal advantage isn't ever enough. That's when Mbappe got the ball. A lightning fast turn and a sudden burst of speed and he was in the penalty box in a nano second. And then it was wizardry. Three four Morocco shirts and Mbappe zigzagged his way through. The ball wouldn't leave his feet and the world watched in awe. It was his stage. His amphitheatre. In front of President Macron, it was all Mbappe. He was the pied piper in a team sport and billions were just hooked on to what he was doing. When he released the ball, Morocco defence all decimated, all that the substitute had to do was tap the ball in. 2-0 France and the Moroccan miracle was over.

Second only to Just Fontaine in the all-time goal scorers list for France at 24, Mbappe is poised for greatness. He already is a great of our times. And Qatar 2022 has already seen the Mbappe imprint. Time and again he has taken France ahead, given them the edge a world champion side needs. Physically the strongest, his pace and his strength makes him a combination unstoppable. May be that's where he has an edge over Leo Messi, the greatest that has played the game in this generation. With age, skill, pace and hunger all rolled into one, Kylian Mbappe is all set to make the Lusal his own for one final time tonight. He is the one standing between Messi and a fairy tale finish. If Argentina stop him, they stop France. And if that happens, Messi could well be greater than even Maradona. Messi v Mbappe. Final within a fess!



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Kylian Mbappe.

#WILDLIFE

Weird & Wild Animal Behaviours

The diverse animals that dwell on Earth have adapted to survive in their environments and interact with members of their and other species in ways that can be exquisitely fine-tuned-and sometimes downright weird. Every year researchers turn up new findings on the strange, cool and sometimes hilarious behaviours animals can exhibit, and 2022 was certainly no exception. Below we have rounded up a few of our favourites from the past year.

Yum, Fossils For Lunch

Researchers got a big surprise when their underwater cameras showed colonies of fuzzy deep-sea sponges carpeting extinct volcanoes in the extreme conditions at the bottom of the frigid, ice-covered Arctic Ocean. How were these creatures surviving in an area notoriously thin on food? It turns out they have bacteria that help them digest the fossils of long-extinct tube worms.

The birds have since learned to defeat at least one of these strategies, suggesting they may learn and adapt, forcing humans to look for more elaborate methods to ward them off. We, for one, welcome our bin-raiding avian overlords.

Setting A Mucus Microbe Trap

Okay, so technically these aren't animals. But they are living

organisms, and they bring plenty of weird to the table. Mixoplankton are protists, which are basically any eukaryote-an organism with one or more cells that have a nucleus and organelles-that isn't an animal, plant or fungus. They get energy through both photosynthesis and eating other microbes.

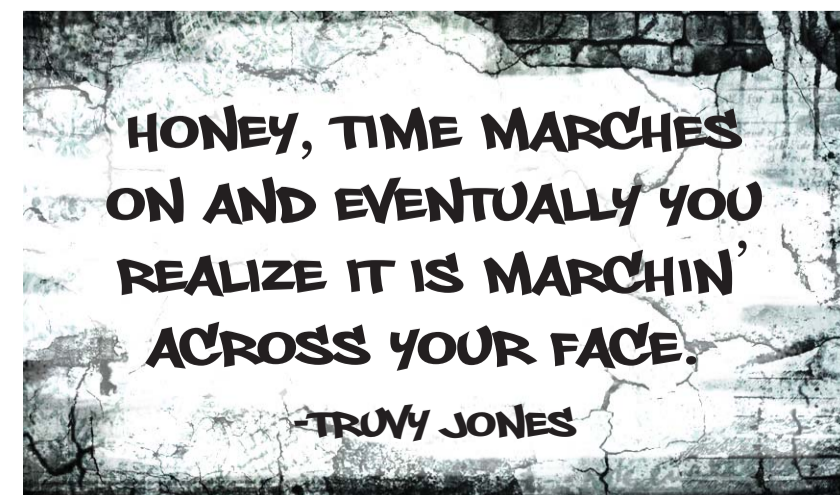
This year scientists discovered one species of mixoplankton, Proorocentrum cf. balticum, builds a bubble of mucus around its body overnight and then lures its prey (microbes) into this "mucosphere." That mucosphere is also rich in carbon, which is stored on the seafloor after the mucus is shed.

Octopus Fiiiiiight!

Like a New Yorker declaring, "Hey, I'm walkin' here!" gloomy octopuses living in dense conditions off the coast of Australia might communicate with their fellows-by throwing things. Underwater cameras captured the cephalopods collecting shells, silt and algae with their arms and hurling them at one another by using jets of water from their siphon to propel the scraps.

The researchers even observed the receiving octopuses ducking to avoid a hit. Scientists haven't yet worked out exactly what motivates the behaviour-but suspect it is some form of communication.

THE WALL



BABY BLUES



By Rick Kirkman & Jerry Scott



ZITS



By Jerry Scott & Jim Borgman

