



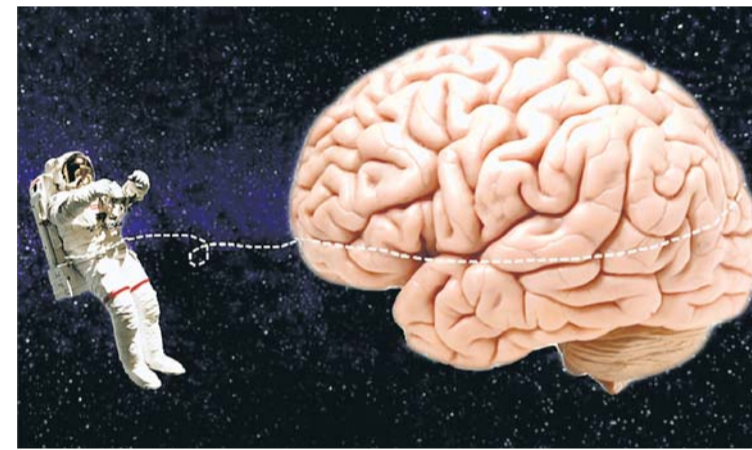
### Dinosaur Day

Dinosaurs have been the subject of scrutiny, fascination and even mysticism for more than 300 years, since the first dinosaur bone was discovered by scientists. Now, *Dinosaur Day* provides an opportunity for students, teachers and just general fans of dinosaurs to learn more about them and celebrate them, just as they deserve! While no one knows exactly the dates, some scientists have researched and estimated that non-bird dinosaurs, probably, were roaming the planet in the time range from 245 to 66 million years ago, which was still millions of years prior to human history.

### #BRAIN-RESET

## A Long Space Trip

As we enter a new era in space travel, researchers were interested in how the human brain reacts to travelling outside Earth's gravity. They studied brain scans of 30 astronauts from before and after space travel. Their findings revealed that the brain's ventricles expand significantly in those who completed longer missions of at least six months, and that less than three years may not provide enough time for the ventricles to fully recover.



Frequent space travellers should wait three years after a longer mission to allow the physiological changes in their brains to reset, a new study suggests. As we enter a new era in space travel, researchers were interested in how the human brain reacts to travelling outside Earth's gravity.

They studied brain scans of 30 astronauts from before and after space travel. Their findings revealed that the brain's ventricles expand significantly in those who completed longer missions of at least six months, and that less than three years may not provide enough time for the ventricles to fully recover.

Ventricles are cavities in the brain filled with cerebrospinal fluid, which provides protection, nourishment, and waste removal to the brain. Mechanisms in the human body, effectively distribute fluids throughout the body, but in the absence of gravity, the fluid shifts upwards, pushing the brain higher within the skull and causing the ventricles to expand.

"We found that the more time people spent in space, the larger their ventricles became," says Rachael Seidler, a professor of Applied Physiology and Kinesiology at the University of Florida and an author of the study. "Many astronauts travel to space more than one time, and our study shows that it takes about three years between flights for the ventricles to fully recover."

Based on studies so far, ventricular expansion is the

The increasing population of flamingos in the wetlands of Rajasthan is a positive news. But to maintain their steady population and make the yearly visit a regularity, it is essential that they are provided abundant blue-green and red algae, along with small insects and small fish for their sustenance in this season. But the shrinking water bodies pose a major threat to their basic existence. According to reports, until a few years ago, thousands of flamingos and migratory birds used to visit the lake. Even the trees in the lake acted as breeding ground for the birds. "The number of trees has, however, declined to almost zero and the various channels of water have also dried up, giving in to the increasing population pressure," an expert said.

# We Will Loose Our Flamingoes!!

PART:1



### Protection needed

The 230 sq.kms shallow, elliptical wetland straddles the districts of Jaipur, Nagaur and Ajmer. Salt production in Sambhar is nothing new. It has taken place for centuries, but in a traditionally sustainable manner, providing livelihood to the local community. The Mughals, the British, and now, *Sambhar Salts Ltd.* (a subsidiary of Hindustan Salts Ltd., a public sector company) have all controlled salt production. But today, there is a mushrooming of illegal salt mining and that is grievously threatening the wetland ecosystem.

*Nawa*, on the northern side of Sambhar Lake, is controlled by private salt manufacturers. It is notorious for the many illegal borewells that over-extract brine. The salt pans encroach upon the lake, and pipelines transport brine, with unauthorised electric cables, across several kilometres, connecting the lakebed to villages. As one travels to Nawa, we can see mounds of salt, even from a distance. Pumps are attached to the borewells, dug deep inside the lakebed, and a mesh of wires, covered with mud, lies on top.



Anjali Sharma  
Senior Journalist & wildlife enthusiast

bright pink color. The Greater Flamingo is considerably larger than its cousin, the Lesser. Its neck is longer, the larger bill is less prominently kinked, bit more banana-shaped.

Apart from Flamingos, the survey also noted the presence of winter migratory birds such as Northern Shoveler, Pied Avocet, Common Redshank and Black-winged Stilt, which is a local species. Over the last few years, the numbers of these species had seen a sharp decline. Hence, their visible presence is significant and a matter of joy, despite the fact that the lake, on which they thrive, is shrinking.

The survey will help maintaining the status of this wetland habitat of the migratory birds, and also keep a record of waterbirds' population, species diversity and migration, according to T. K. Roy, AWC, Delhi State Coordinator, a member of the team, that conducted the census. He adds that it will help in creating conservation awareness and for sustainable protection and conservation of this important wetland. It is another matter that not much happened. Though, the Rajasthan Tourism Department advertises,

"Have you ever seen a flamingo eat? They look like they're doing headstands for lunch! Turns out, their oddly-shaped beak is perfectly designed for scooping up food while upside down in the water. It is a much declining sight, fast approaching something to be viewed in old movies only. The reasons are all well-documented and known to all.

There was a time in Rajasthan, around 2014, when it was reported that there was a rise in the population of flamingos in the desert state of India, and it is flocking with pink-feathered birds, this season. The *Asian Waterbird Census* (AWC), which was completed on January 16th, had noted an increase in the number of Greater Flamingos (*Phoenicopterus roseus*) and Lesser Flamingos (*Phoeniconotus minor*) in the state.

The census found 1300 greater flamingos and 1800 lesser flamingos in the wetlands of *Gudha Jhapong and Devyani* area in *Sambhar Lake* area of Rajasthan, which is the largest natural depression in India. The lesser flamingo is classified as 'Near Threatened' (NT) on the IUCN Red List and both need a safer habitat to survive.

Flamingos are beautiful, long-legged birds with thousands moving, breeding and feeding together. Their unique bills help them feed by plunging their heads into the water upside-down and filtering the water for shrimp, which, in turn, gives the flamingo its



Sambhar, The salty marshes of Rajasthan.

### #FLYING AWAY



A flock of Flamingos, at Sambhar Salt Lake, about 75 kms from Jaipur.

### Shrinking Habitat

The increasing population of flamingos in the wetlands of Rajasthan is a positive news. But to maintain their steady population and make the yearly visit a regularity, it is essential that they are provided abundant blue-green and red algae, along with small insects and small fish for their sustenance in this season. But the shrinking water bodies pose a major threat to their basic existence. According to reports, until a few years ago, thousands of flamingos and migratory birds used to visit the lake. Even the

trees in the lake acted as breeding ground for the birds. "The number of trees has, however, declined to almost zero and the various channels of water have also dried up, giving in to the increasing population pressure," an expert said. The census report also highlighted the sorry plight of the lake. It was found to be lacking on most of the parameters on which it was evaluated. Although, the catchment area of the lake is 245 kms, owing to the poor rainfall in the area, there are

only two small water bodies. The remaining areas are all dry. The group from AWC has suggested that measures be taken by the government to restore water in the lakes for the cause of ecological conservation. Citing the fact that the quality of water is an important factor in the existence and survival of migratory birds, Mr. Roy said, "The quality of water is such that it should be conducive for cultivation of vegetation and fish breeding, required by birds."

### Illegal Salt Mining is threatening Sambhar Lake

The vast expanse of a beautiful lake, only that it is dry, encrusted with salt. The bright sunshine lends a silvery sheen to the salt flats. As one crunches their way across a *kyar* (salt pan), one sees a few birds wading in a little pool of water at Rajasthan's *Sambhar Lake*, India's largest inland salt lake and the site of a recent avian tragedy. In late 2019, the lakebed had turned into a mass graveyard for migratory birds. An estimated 25,000 birds dropped dead, Kentish Plovers, Tufted Ducks, Northern Shovelers, Pied Avocets, Little ringed Plovers, Stilts and Gadwalls, among 36 species. The Indian



Veterinary Research Institute in Bareilly said that avian botulism could be the culprit. As Sambhar Lake came under the international spotlight for this mass die-off, another phenomenon drew attention to the lake, rampant illegal salt mining and a *shrinking wetland*. Salt pans were proliferating and illegal borewells dotted the area, causing a massive degradation of the famous lake.

### What is the Asian Waterbird Census

The *Asian Waterbird Census* is an annual event which takes place across Asia and Australia, every January. Thousands of volunteers visit wetlands in their country and count waterbirds. AWC is a part of global waterbird monitoring programme, the International Waterbird Census (IWC), which is coordinated by Wetlands International. There are national coordinators across each country, who may be approached by volunteers and bird-lovers, interested in participating in the census.

### Sucked away

"Sambhar Lake's future is totally dependent on the seasonal rivers that flow into it during the monsoon. But now, this water is being sucked away before it reaches the lake, causing it to dry up," says ecologist Harsh Vardhan. Mendha, Rupangarh, Kharian, Khandel and several such streams and rivulets used to recharge the lake. But the farmers in the 7,560 sq.kms. catchment area of the lake have built surface embankments across the rivers, obstructing their downstream flow into the lake. They

have sunk tubewells along the rivers and laid pipelines to transport water to their fields, choking the rivers and ultimately threatening the wetland ecosystem. The lake supports flamingos and migratory birds from as far away as Siberia, that feed on the algae and micro-organisms found in the saline waters. Members of Wildlife Creation Organization, a local NGO, recall wistfully how the entire lake would turn pink with thousands of flamingos, just a decade ago.

### Optimum use

T. K. Roy, a conservationist, counted 1,004 birds belonging to 30 species during the annual *Asian Waterbird Census*, this January. This is a dramatic decline from last year's 43,510 birds. But 2020 might have been an exceptional year due to the rains. The last few years have shown an otherwise steady decline.

"It is an issue of management. Sambhar Lake should be clearly demarcated and its uses defined, taking all stakeholders into consideration," says R.N. Mehrotra, former Principal Chief Conservator of Forests, Rajasthan, and member of an expert committee formed to give recommendations to the High Court on Sambhar. He adds that

Sambhar, being on revenue land, was never scientifically managed as an ecosystem. "Sustainability will come only when there is optimum use. There is a habitat here for birds. Until the forest department is given an identified area for the habitat, they cannot make it sustainable."

To add to the wetland's woes, a tented heritage resort has come up, and a 117-year-old, 11 kms meter gauge train line was re-laid, three years ago. As I stroll along the white earth, I wonder, what is the rationale of ecotourism, if the wetland and its birds are, themselves, under threat?

To be continued...

rajeshsharma1049@gmail.com



Flamingos.

### #PHILOSOPHY

# There Is No 'Self'

"Why are you unhappy? Because 99.9 per cent of everything you think, and of everything you do, is for yourself, and there isn't one."



The brain-powered individual, which is variously called the *self*, the *ego*, the *mind*, or *'me'*, lies at the center of Western thought. In the worldview of the West, we herald the greatest thinkers as world-changers. There is no more concise example of this than philosopher René Descartes' famous statement, "*Cogito, ergo sum*," or "I think, therefore I am." But who is this? Let's take a closer look at the thinker, or the *'me'*, we all take for granted.

### Eastern view: The Self is an Illusion

Now let's turn to the East. Buddhism, Taoism, the *Advaita Vedanta* school of Hinduism, and other schools of Eastern thought have quite a different take on the self, the ego, or *'me'*. They say that this idea of *'me'* is a fiction, although, a very convincing one. Buddhism has a word for this concept, *'anatta'*, which is often translated as *'no self'*, which is one of the most fundamental tenets of Buddhism, if not the most important. This idea sounds radical, even nonsensical, to those who are trained in Western traditions. It seems to contradict our everyday experience, indeed our whole sense of *'being'*. But in Buddhism and other schools of Eastern thought, the concept of the self is seen as the result of the think-

ing mind. The thinking mind reinvents the self from moment to moment such that it, in no way, resembles the *stable coherent self* that most believe it to be. Put another way, it is the process of thinking that creates the self, rather than there being a self, having any independent existence separate from thought. The self is more like a verb than a noun. To take it a step further, the implication is that without thought, the self does not, in fact, exist. In the same way that walking only exists while one is walking, the self only exists while there are thoughts about it. Neuropsychologists say that science is just now catching up with what Buddhist, Taoist, and Advaita Vedanta Hinduism have been teaching for over 2,500 years.

### Western view The Self is a Pilot



This 'I', for most of us, the first thing that pops into our minds, when we think about who we are. The 'I' represents the idea of our individual self, the one that sits between the ears and behind the eyes and is 'piloting' the body. The 'pilot' is in charge. It doesn't change very much, and it feels to us like the thing that brings our thoughts and feelings to life. It observes, makes decisions, and carries out actions, just like the pilot of an airplane.

This 'I' ego is what we think of as our true selves, and this individual self is the experienter and the controller of things like thoughts, feelings, and actions. The pilot self feels like it is running the show. It is stable and continuous. It is also in control of our physical body, for example, this self understands that it is *'my body'*. But unlike our physical body, it does not perceive itself as changing, ending (except, perhaps, for atheists, in bodily death), or being influenced by anything other than itself.

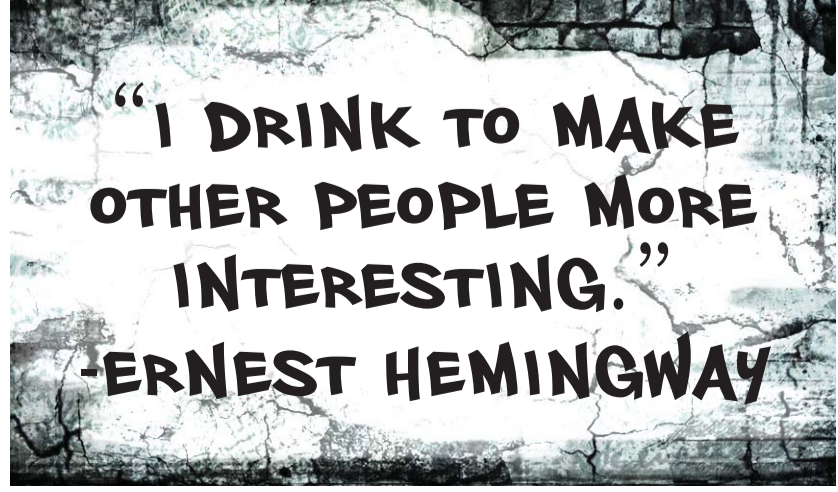
### There is no 'Self-Centre' in the brain



The great success story of neuroscience has been in mapping the brain. We can point to the language centre, the face processing centre, and the centre for understanding the emotions of others. Practically every function of the mind has been mapped to the brain with one important exception, the self. Perhaps, this is because these other functions are stable and consistent, whereas the story of the self is hopelessly

inventive with far less stability than is assumed. While various neuroscientists have made the claim that the self resides in this or that neural location, there is no real agreement among the scientific community about where to find it, not even whether it might be in the left or the right side of the brain. Perhaps, the reason we can't find the self in the brain is because it isn't there.

### THE WALL

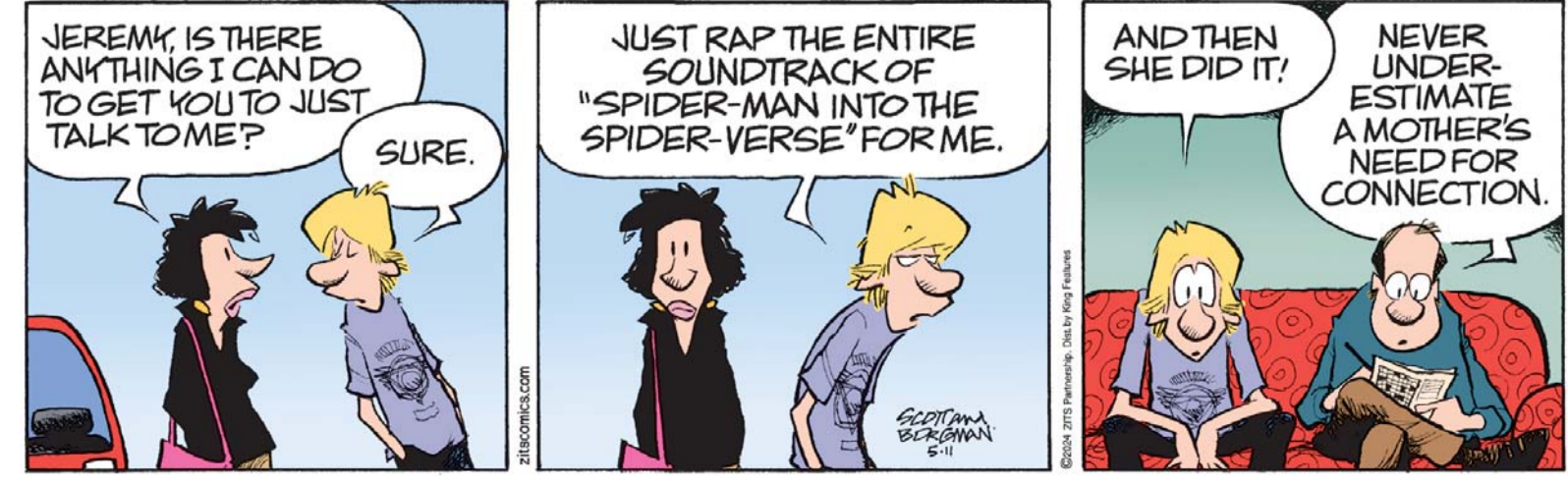


### BABY BLUES



By Rick Kirkman & Jerry Scott

### ZITS



By Jerry Scott & Jim Borgman

