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Editorial: "Living Space: Humanity's Next Frontier"



The goal of success has always been to touch the sky. Primitive man wanted to know the secrets of the sky. Stories about the billions of stars appearing in the night sky kept arising in him. The nighttime glow fascinated him. He carved what he saw into paintings on rocks. Thus, the science of primitive man began simply by observing and admiring the sky. He studied the constellations and enjoyed naming each group after animals he saw in the forests. Man's mind was racing to reach the stars and planets that were unreachable. Its longing continues to this day.

As a result, our space telescopes are currently exploring the constellations of various star families beyond the solar system. Man, who has been exploring the secrets of the sky against the backdrop of science, now stands in awe of its boundless expanse. The UN General Assembly, through resolution 54/68 on December 6, 1999, proclaimed World Space Week (WSW) to celebrate the contribution of space science and technology to the advancement of the human condition. World Space Week (October 4-10) is the world's largest annual space event. It helps to inspire students and develop the researchers and personnel for tomorrow's space program. World Space Week events serve to foster international cooperation in space communication and education, and to educate the public about space activities. Each year, a theme is selected by the World Space Week Association Board of Directors. The theme for 2025 is "Living in Space". The theme explores humanity's journey to make space a habitable place, highlighting innovative technologies, challenges, and collaborative efforts to realize this vision.

*For decades, space was the final frontier, the realm of satellites, astronauts, and telescopes peering into the unknown. But today, the idea of **living in space** is no longer a distant dream. From NASA's Artemis missions to SpaceX's interplanetary ambitions, the global effort is clear. **India, too, has emerged as a pioneering force**, transforming itself from a humble spacefaring nation to a global leader in cost-effective, high-impact missions. In recent years, the **Indian Space Research Organisation (ISRO)** has captured the world's attention with missions that combine scientific brilliance with budgetary discipline. The success of **Chandrayaan-3** in 2023, which made India the first nation to land near the Moon's south pole, stands as a proud symbol of indigenous innovation and determination. The rover, Pragyana, not only conducted vital lunar experiments but also proved that **India's space dreams are grounded in reality**. The earlier **Mangalyaan (Mars Orbiter Mission)** in 2014 was another testament to India's ingenuity. Achieved at a fraction of the cost of other Mars missions, it made India the first Asian country to reach Martian orbit and the only one to do so successfully on its maiden attempt.*

*Looking ahead, ISRO's ambitious **Gaganyaan mission**, which aims to send Indian astronauts into space, will mark a historic moment — our first steps toward **living and working in space as a nation**. With growing collaborations in space science, the development of space habitats, and a focus on space-based solutions for agriculture, weather, and communication, India is not just participating in space exploration — **it is shaping the future of "living space" itself**.*

Yet "living space" holds dual meaning. It speaks not only to habitats beyond Earth, but also to how we live within the limited space of our own planet. Climate change, overpopulation, and resource scarcity force us to rethink how we design and share our living spaces. In this light, space exploration becomes more than a scientific endeavor; it is a mirror reflecting our responsibilities on Earth. Technologies developed for life in space — from closed-loop life support systems to sustainable energy solutions — are increasingly influencing how we address Earth's challenges. As India develops green propulsion systems and builds satellites to monitor environmental changes, **space becomes a tool for Earth's survival, not just our escape.**

As we celebrate **World Space Week 2025**, let us not be content with marveling at the stars. Let us prepare — not only technologically, but ethically and environmentally — for the era of living space. Let this be a time to dream boldly, act wisely, and build a future where space is not just where we go, but where we belong. The theme of "Living in Space" is promoted at World Space Week events through activities ranging from educational workshops, interactive sessions, panel discussions and collaborative projects with younger generations and public. All of these aim to foster innovative environmental solutions and humanities.

Chief Editor
IJONS

Cover Image: *Euphaea dispar Rambur.* (Nilgiri Torrent Dart Damselfly) - Male /
Endemic Species in Western Ghats, India.

Family: Euphaeidae / Status: IUCN -Red List (LC)

Image Credit : V.Priyadharshini