IndiaWilds
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IndiaWilds Newsletter

Vol 6. Issue X October 2014

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Inside this issue:

Clean India – Below the tip of the Iceberg

The Hon'ble Prime Minister of India has launched a "Swachh Bharat" or Clean India campaign invoking the name of Mahatma Gandhi much to the chagrin of his political opponents.

Clean rivers

He is however unperturbed and has co-opted Bollywood icon Amir Khan, Boxing Queen M.C. Mary Kom, Industrialist Anil Ambani whose company runs many power plants and a host of people including Shashi Tharoor of Congress. It is a different matter that the Congress party didn't view Tharoor's acceptation of the invite kindly. Following this high voltage campaign one can see all these icons, business leaders and other people posing with the proverbial broom. Not to be left behind, Arvind Kejriwal, whose party has the broom as its official election symbol started cleaning in front of the PM's house. The wildlife conservation community has by and large watched this competitive populism from the sidelines. With the current Prime Minister's panache for such high voltage campaigns, it would be worthwhile to examine if India's environment and wildlife can benefit from it.

The popular campaign has led to people cleaning the roads. However, is that enough?

Do we have goals for the Swachh Bharat or Clean India campaign?

Indian villages used to be neat and clean as the women folk used to sweep the area in front of their house everyday morning and sprinkle cow dung mixed water on it. Each resident used to keep the area in front of their house clean.

Even today, one can see remnant of that practice, when shopkeepers open their shop in the morning with Puja and then sprinkle water in front of their shops. Unfortunately with the advent of municipalities, the concept of individual responsibility vanished as we started depending on an external entity, even though that external entity is their own collective body. Unfortunately, that is how we view our local panchayats, municipalities and Governments.

Individual Responsibility:

I hope this campaign at least makes the people aware that they are responsible for their wastes and have a responsibility to dispose it. In the 2014 Football World Cup in Brazil, Japanese spectators cleaned the part of the Stadium where they were seated after the match was over. This was an eye opener for many people and created a perception about the Japanese as being a “civilised race”.

The campaign should also make people aware that they need to dispose the wastes in the waste bins, but they should segregate the non-biodegradable wastes and dispose separately.

However, that in itself is not enough.

With our increasingly digital lifestyle, our e-waste needs to be recycled. The face of earth is already pockmarked by mines. Recycling will lead to reducing this burden of mining. Unfortunately, despite the e-waste rules being notified, nothing much has happened. The industry views it as a burden and the infrastructure to collect the e-waste and recycle it to recover valuable materials is not in place. Despite the term “Producers responsibility” being included in the e-waste rules, there are enough loopholes with only a few electronic products covered and as usual implementation is non-existent.

“Swachh Bharat” to me also means these e-wastes doesn’t get into landfills to poison our soil and water.

However this is not enough. We cannot solely focus on individual responsibility.

Industrialists into the game:

The industrialists like Mr. Anil Ambani, instead of wielding a broom to clean the streets should focus on ensuring that his power plants doesn’t discharge effluents into the nearby water bodies and release noxious fumes into the air. It is another matter that individuals like him when focused on their core competencies can create more impact rather than individually wielding the broom.

India's rivers are dying a slow death. Our rivers have become gutters due to unrestrained discharge of industrial effluents and sewerage. The Hon'ble Supreme Court even expressed its anguish as to why the Government hasn't been able to ensure a clean Ganga even after 29 years. Thousands of industries continue to function without effluent treatment plants and discharge their effluents into the rivers. Despite strict laws, implementation is lax due to rampant corruption in the various PCBs (Pollution Control Boards). It is well known that these PCBs are a conduit for making money for politicians, which apart from increasing the personal wealth also helps in fuelling political campaigns.

Unfortunately, the Central Government choose to give an affidavit in the Supreme Court stating that they need 18 years to clean the Ganga. It is well known that neither the politicians, nor the bureaucrats will be there to answer after 18 years. The Hon'ble minister Uma Bharti soon after the elections had stated that the Narendra Modi Government will make spitting in Ganga an offence. This statement clearly shows that we miss the big picture. Unrestrained pollution by industries goes scot-free degenerating the rivers into large toxic drains.

Similarly sewerage disposal due to lack of civic infrastructure is putting a huge pressure on the rivers. Not only every city, but also the clusters or housing societies should have effluent treatment so that there is only discharge of treated water into the drains. Rainwater harvesting has to be made mandatory in all housing societies so that we need to draw less water through canals from the rivers.

Sand mining is a major threat to the rivers as it maims the river as water cannot percolate and regenerate the rivers. The mad rush to create housing is posing a severe challenge, as illegal sand mining is rampant. The housing boom in India was started when the Government felt that it needs to boost investment in the sector and hence started giving income tax breaks. It's been more than two decades, virtually every square inch of land has been concretised, and now there is huge unsold inventory of residential apartments. So the Government should soon remove income tax breaks from housing. That should immediately reduce the demand and hence sand mining as well as grabbing wetlands for construction will be stopped.

Swachh Bharat to me means clean rivers. Our rivers and streams should be clean so that we can drink without fear of gastroenteritis and bathe without fear of skin disease.

Hopefully the Government will delve deeper into the above issues to give a new life to our rivers.

Right to Clean Air:

India's capital city New Delhi is in news as its air quality in the month of January 2014 was worse than that of Beijing. A 2010 report by the Health Ministry says that 1.3 crore people above 15 years of age suffer from asthma and 1.1 crore people above the age of 35 years suffer from chronic bronchitis. The Global Burden of Disease (GBD) project estimated that 627,000 people lost their lives in India due to air pollution. The economy will also suffer due to the impact of absenteeism, drop in productivity of the work force. For further details check: http://www.indiawilds.com/diary/indiawilds-newsletter-vol-6-issue-i/

In view of this, the MoEF's recently launched National Air Quality Index (AQI) under the "Swachh Bharat" or Clean India campaign is a welcome move. Shri Javadekar, the Hon'ble Minister for MoEF & CC said that the National AQI is an "One Number-One Colour-One Description" for the common man to judge the air quality of his/her area as the data in colour codes would be put up in public domain. On the surface it is good to bring in transparency. The AQI is based on 8 pollutants and rated in six different categories from Good to Severe.

The benchmarks are more or less as per the advanced countries. For example, the $PM_{2.5}$ limit for Australia is 25 µg/m^3. For Canada it is 30 µg/m^3. For China, as expected, the standard is loose and is at 75µg/m^3. However, 61-90 is moderately polluted as per the $PM_{2.5}$ AQI norm by MoEF with 0-30 level being rated as good.

The AQI values and corresponding ambient concentrations (health breakpoints) as well as associated likely health impacts for the identified eight pollutants are as follows:

AQI Category, Pollutants and Health Breakpoints								
AQI Category (Range)	PM_{10} 24-hr	$PM_{2.5}$ 24-hr	NO_2 24-hr	O_3 8-hr	CO 8-hr (mg/m^3)	SO_2 24-hr	NH_3 24-hr	Pb 24-hr
Good (0-50)	0-50	0-30	0-40	0-50	0-1.0	0-40	0-200	0-0.5
Satisfactory (51-100)	51-100	31-60	41-80	51-100	1.1-2.0	41-80	201-400	0.5 –1.0
Moderately polluted (101-200)	101-250	61-90	81-180	101-168	2.1- 10	81-380	401-800	1.1-2.0
Poor (201-300)	251-350	91-120	181-280	169-208	10-17	381-800	801-1200	2.1-3.0
Very poor (301-400)	351-430	121-250	281-400	209-748*	17-34	801-1600	1200-1800	3.1-3.5
Severe (401-500)	430 +	250+	400+	748+*	34+	1600+	1800+	3.5+

**One hourly monitoring (for mathematical calculations only)*

However, no amount of data collection or statistical analysis is going to be of much use, if the Government does not take suitable and time bound actions. Else, it would be a case of depending on these statistics just for its media campaigns - the way a drunken man uses a lamppost – for support rather than for illumination.

It is also a welcome move to sensitise students about the importance of cleanliness by including it in the curriculum. However, we will continue to call for making "Right to Clean Air" as one of our Fundamental Rights.

A recent study in US (*D.J.Nowak et al. / Environmental Pollution 193 (2014)*) estimates that more than 850 human lives are saved a year due to trees removing air pollution. Trees prevent almost 6.7 lakh incidences of acute respiratory conditions. In monetary terms this amounts to 7 billion dollar or 42,000 crore rupees. The percentage of Indians living in urban areas has increased from 27.8% in 2001 to 31.16% in 2011 (source: Census). Since urbanization is increasing, it is important that the Government takes steps to create urban forests so that the quality of air improves bringing along the much-needed benefits in health.

Swachh Bharat to me means being able to breathe fresh air without falling prey to diseases.

Say No to Synthetic Pesticides and Fertilisers:

The so-called Green Revolution, which had resulted in an initial boost in farm produce, gave rise to use of synthetic fertilisers and pesticides. The subsidies giving by the Government which artificially makes it affordable for the farmers to buy these fertilisers and pesticides, apart from enriching the pesticide and fertiliser lobby and the politicians also has resulted in toxic residues in our fruits, vegetables and even in tea. These toxic chemicals also leach into our water and poison our rivers, streams, lakes and other water bodies. Together they have a huge harmful impact on us as well as on our wildlife.

The Government has to promote use of organic manure and organic pesticides like neem based pesticides and phase out synthetic pesticides and fertilisers. Apart from improving the Union budget as the subsidies have ballooned to some 60,000 crores every year, promoting organic farming can help in improving our health as well as help compete in exporting organic foods.

Swachh Bharat to me means our fruits and vegetables are free from toxic residues from synthetic pesticides and fertilisers.

Life on Earth: By Debasis Bose

Imagine the event of big bang, and subsequent formation of earth as a gaseous mass about 13.7 billion year ago. It took nearly 9 billion years for the gas mass to cool and support the first life in form of microorganism.

If the time of Earth's existence was condensed into a 24-hour clock, the moon formation event occurred just 10 minutes after the Earth was born. The Earth formed 4.56 billion years ago, and the Moon formed about 30 million years later. At that time, the Earth was a magma ocean. An impactor about the size of Mars struck the Earth at an oblique angle, and removed some of the magmatic mantle. This mantle was put in orbit around the Earth, together with some of the debris from the impactor itself, and this material eventually formed the Moon.

When the Moon first formed, it was very close to the Earth. It was possibly only 20 to 30 thousands of kilometres away, and it would have looked extremely large in the sky, at least 20 to 10 times bigger. But there were no living creatures on the Earth at that time to witness this beautiful scene.

The tidal effect of a body increases as a cube of the distance, so the effect of the Moon's tidal forcing on the Earth was extremely high at this time, to the point that the early magma ocean was affected. This provided some additional energy to the heating from radioactive elements present, but after the radiogenic heating decayed, the Moon still was a source of heating that may have had some geological effect, keeping the Earth's magma hot and perhaps forcing additional convection in the Earth's mantle.

After the Earth started to cool, the first crust started to float on top of the magma. During this period the Earth was subjected to increased meteor bombardment. The bombardment had been very intense at the beginning of the solar system and then had started to decline, but about 500 million years after the birth of the Earth, or about 2 hours and 40 minutes into our clock of 24 hours, there was a burst of impactors. This lasted for about hundred million years, and we call this "the late heavy bombardment." Many of the large basins on the Moon are evidence of this late heavy bombardment period. In this way, the Moon is a history book for the inner solar system and the Earth. NASA have studied these basins with the SMART-1 mission.

The Earth was hit more often than the Moon, however, because Earth is larger and has more gravity. This increased gravity also caused the impactors to be accelerated to higher velocities towards the Earth. That must have been a catastrophic time to be here. So many bombardments would have sterilized the planet. If life had appeared before this period, it would have been extinguished unless it found a way to retreat into niches where it could be protected from these global catastrophes.

When some of these impactors hit the Earth, the explosion caused rocks and dirt from Earth to shoot up and away from our planet. Some of that projected material flew all over the solar system, and some of it landed on the Moon. There could be a few hundred kilograms of Earth material per square kilometre of the Moon's surface, buried under a few meters of lunar soil. It would be interesting to retrieve those rocks and bring back samples of the early Earth.
Almost nothing from this ancient time period has survived on the Earth because of tectonic recycling of the crust plates or because of atmospheric weathering. We would try to detect some organics within those rocks, and that could tell us about the history of organic chemistry on Earth. Some of these rocks could even have preserved fossils of life. Such rocks could help us look further back into the fossil record, which now stops at 3.5 billion years ago. This way, we could possibly learn about the emergence of life on Earth.

The Moon has been a stabilizing factor for the axis of rotation of the Earth. Looking at Mars, for instance, that planet has wobbled quite dramatically on its axis over time due to the gravitational influence of all the other planets in the solar system. Because of this obliquity change, the ice that is now at the poles on Mars would sometimes drift to the equator. But the Earth's moon has helped stabilize our planet so that its axis of rotation stays in the same direction. For this reason, we had

much less climatic change than if the Earth had been alone. And this has changed the way life evolved on Earth, allowing for the emergence of more complex multi-cellular organisms compared to a planet where drastic climatic change would allow only small, robust organisms to survive and it took nearly 13.7 billion years to evolve.

Now explaining the cyclical alternation of ice and warm periods, mathematician Milutin Milankovitch (1879-1958), calculated the changes in Earth's orbit and the resulting insolation on Earth, Milankovitch became the first to describe that the cyclical changes in insolation is the result of an overlapping of a whole series of cycles: the tilt of Earth's axis fluctuates by around two degrees in a 41,000-year cycle. Moreover, Earth's axis gyrates in a cycle of 26,000 years, much like a spinning top. Finally, Earth's elliptical orbit around the sun changes in a cycle of around 100,000 years in two respects: on the one hand, it changes from a weaker elliptical (circular) form into a stronger one. On the other hand, the axis of this ellipsis turns in the plane of Earth's orbit. The spinning of Earth's axis and the elliptical rotation of the axes cause the day on which Earth is closest to the sun (perihelion) to migrate through the calendar year in a cycle of around 20,000 years: currently, it is at the beginning of January; in around 10,000 years, however, it will be at the beginning of July.

Looking forward, global warming is an inescapable issue for modern age. But 180 years ago, most scientists believed that Earth had been steadily cooling since it was formed. When Louis Agassiz presented the concept of a Great Ice Age to the Swiss Society of Natural Sciences in 1837, his suggestion that the planet had turned colder and then warmed up again was met with skepticism and even hostility, triggering years of fierce scientific debate before the idea was accepted.
Exactly why our planet occasionally cools down has taken more than a century to work out. Now we know that cyclic gravitational tugs from Jupiter and Saturn periodically elongate Earth's orbit (as calculated by mathematician Milutin Milankovitch), and this effect combines from time to time with slow changes in the direction and degree of Earth's tilt that are caused by the gravity of our large moon. Consequently, summer sunlight around the poles is reduced, and high, latitude regions such as Alaska, northern Canada, and Siberia turn cold enough to preserve snow year round. This constant snow cover reflects a great deal of sunlight, cooling things down even more, and a new ice age begins. Naturally, this process does not occur with anything like the speed portrayed in the movie The Day After Tomorrow, but geological and other evidence shows that it's happened at least four times.

But even that warming will not stave off the eventual return of huge glaciers, because ice ages last for millennia and fossil fuels will not. In about 300 years, all available fossil fuels may well have been consumed. Over the following centuries, excess carbon dioxide will naturally dissolve into the oceans or get trapped by the formation of carbonate minerals and along with the facts that our molten iron core that provides us with a magnetic shield against deadly forms of stellar radiation. Such processes won't be offset by the industrial emissions we see today, and atmospheric carbon dioxide will slowly decline toward preindustrial levels. In about 1,500 - 2,000 years, when the types of planetary motions that can induce polar cooling start to coincide again, the current warming trend will be a distant memory.

This means that humanity will be hit by a one-two punch the likes of which we have never seen. Nature is as unforgiving to mankind as it was to dinosaurs; advanced civilization will not survive unless we develop energy sources that curb the carbon emissions heating the planet today and help us fend off the cold when the ice age comes. Solar, nuclear, and other non-fossil-¬fuel energy sources need to be developed now, and above all deforestation needs to be stopped, before carbon emissions get out of hand. Developed world and few opportunists are playing a prominent part in discovering the technology needed to keep us all going. And while doing so no one wants to miss the bus of opportunities, of fortunes to be made from it.

Epilogue: Our planet has been through a lot worse than us. Been through earthquakes, volcanoes, plate tectonics, continental drift, solar flares, sun spots, magnetic storms, the magnetic reversal of the poles, gravitational pulls of galaxies and other planets ... hundreds of thousands of years of bombardment by comets and asteroids and meteors, worldwide floods, tidal waves, worldwide fires, erosion, cosmic rays, recurring ice ages ... and will survive many such events. And we think we humans are going to make a difference? The planet isn't going anywhere. WE are! We need to understand that one day

we're going away. And we won't leave much of a trace, either. Maybe nothing or traces never to be found... The planet will be here and we will be long gone. Like dinosaurs just another failed mutation. Just another closed-end biological mistake, an evolutionary cul-de-sac. The planet will shake us off like today we see tiger shaking off water.

Saying that, as human, still believe that we should stop deforestation and respect all the living beings on the planet. Live happily and in harmony till we all vanish into oblivion for eternity.

(Reference and data taken from various write up, publications, articles and papers by NASA, ESA, UKSA, ISRO, Harvard, MIT, CalTech, University of Cologne and documentaries by Discovery, History Ch, NatGeo, BBC, NHK etc).

To discuss this topic check this link: http://www.indiawilds.com/forums/showthread.php?15764-Life-on-Earth

Conservation News

Electrocuted: It is tough time to be a Lion

Lion (*Panthera leo persica*) electrocuted

Lions are progressively moving away from the Gir National Park as they find the area small and prey base inadequate to sustain more than an estimate 400+ lions. Once out of the protected areas, they literally struggle to survive. Moving from one tree covered area to another, preying on wild herbivores as well as feral and domestic cattle, they are increasingly in conflict with people.

Baghnagar is a small village with a population of about 300-400 with people depending mostly on cultivation. There was a time when farmers used to ward away deers, wild boars and Nilgais from their farms by creating noise. These days the farmers have taken the easy route. The farmers connect electricity to the fencing and switch it on during the night to prevent wild herbivores coming into their fields. Mostly herbivores like Nilgais come to the field to feed on the crops. Unfortunately, on 21st October one of these nomads got electrocuted in a field in Baghnagar village in Mahua Taluka in Bhavnagar district of Gujarat.

This poor animal which of late has been chosen as the symbol for the "Make in India" campaign has tried to follow its prey and came in contact with live wire in the fencing and died a sad death.

These few images show the overall size of the animal, power connection in the shed from where lines have been drawn to live wire the fencing, the leg caught in the wires and the cut marks in the body due to the wires.
Images courtesy IndiaWilds contributor Ramesh Makwana.

Conservation News

Conservation News

This is not the sole instance of these wandering lions dying an untimely death. About three weeks ago, one lioness died about 15 kilometers from this village after it fell into a well.

The demand for tiger body parts for use in Chinese medicine has resulted in poaching of not only tigers but also leopards. There has been information that the poachers are shifting their attention to lions. With lions wandering around in search of a suitable habitat, there hasn't been an easier time for the poachers. These lions are bouncing back from an estimated population of 13 in the early 1900s and scientific research tells us that there was another genetic bottleneck. So one virulent disease like foot and mouth disease can wipe away an entire population. The lions are trying hard to eke out a living. They do need assistance from us in helping create not only a second home in Kuno but also hopefully a few more.

Man-Animal Conflict: Man killed by tiger in Bandhavgarh

There is a news from Bandhavgarh Tiger Reserve which none of us would love to hear. Amod Lakda, aged about 55 years and a school teacher by profession is said to have been killed by a tiger while collecting firewood from the Khitouli range.

He was working in a Government school in Karchulia village and probably stumbled onto the tiger near a water tank in the buffer area. The body was recovered from the spot and not dragged away for feeding after the kill suggesting that it is probably an accident. However, the locals took the matter in their hands and burnt forest posts, two jeeps and several motorbikes of the forest department as well as a police post in Khitouli. The locals have demanded the tiger to be declared as a maneater.

Human animal conflict is on the rise as people are often venturing into the forest in search of firewood or for collecting non-timber forest produce like mahua.

http://www.indiawilds.com/forums/showthread.php?15831-Man-killed-by-tiger-in-Khitouli-range-of-Bandhavgarh

Equipment Discussions -

Canon announces CN20x 50IAS H E1 Ultra Telephoto 50-1000mm zoom lens

Canon has launched a 50-1000mm ultra-telephoto zoom lens for nature and wildlife as well as sports. The CN20x 50 IAS H E1 is a cine-servo zoom lens and also has a 1.5x TC built-in.

Salient Features of EOS 7D II

Focal Length: 50-1000mm plus built-in 1.5x TC making it 75-1500mm lens
Aperture: Max aperture (T stop) 5.0 between 50-560mm; T8.9 at 1000mm with 1.5x TC Max T stop is 7.5 between 75-840mm; 13.35 at 1500mm

Magnification: This lens has 20x magnification
Servo: Removable servo mechanism.
Mount: Available in both EF mount as well as PL mount
Length: 41.32cm for EF mount lens and 40.52 for PL mount version
Format: Super35mm format (will fit in C300/C500/C100/Arri Amira etc)
Front element: 136mm
Weight: 6.6kg

Price: $70,200 USD

Canon has bolstered its cine-servo lens line-up with the new CN20x 50 IAS H E1/P1 high performance, ultra-telephoto zoom lens for sports and nature TV production. Delivering superb 4K image quality and exceptional creative control, the CN20x 50 IAS H E1/P1 is the first lens to combine a built-in 1.5x extender, class-leading 20x magnification and a removable servo drive, with a native 50-1000mm focal range that extends to a huge 75-1500mm.

UNPRECEDENTED VERSATILITY

Sports and nature TV productions are demanding and unpredictable, and these shooting environments demand huge levels of flexibility. For nature television, operators work in hostile and sensitive conditions which often necessitate shooting from extremely long distances, while sports productions typically require extremely high resolution for close-to-the-action stadium work. In both environments, operators require fast, reactive positional changes, shooting flexibility and nimble hardware that allow them to respond to changes in the scene.

Portable and lightweight for its class – at around 6.6kg – the CN20x 50 IAS H E1/P1's unrivalled focal length and zooming capabilities make it ideal for both environments. It enables sports and documentary crews to capture footage at distance, while maintaining the highest quality throughout the zoom range. The huge zoom range of the lens also significantly reduces the volume of hardware that crews are required to carry, offering a superb, single lens solution for location shoots. The latest in Canon's cine-servo lens line-up, the CN20x 50 IAS H E1/P1 is also user-friendly, reliable and robust. The design has been developed to ensure high levels of ruggedness and reliability, even in unforgiving broadcast environments – combining the finest quality optics with a weatherproof and shockproof construction that makes it suitable for use in the most hostile conditions when on location, to the same level as conventional Canon broadcast lenses.

FLEXIBLE OPERABILITY

Compatible with a wide range of cameras, the CN20x 50 IAS H E1/P1 also supports communication between lens and camera and will be available in both EF-mount and PL-mount variants. The EF-mount version utilises Canon's own system, while the PL-mount variant supports Cooke's /i Technology standard as well as 12-pin serial communication.

The focus ring rotation is 180 degrees, thus balancing the accuracy required for 4K imaging with the speed needed for broadcast use. In scenarios where every second counts – and operators only have one opportunity to capture a shot – high speed zoom, iris and simple focusing operation mean that even rapidly changing scenes can be captured with ease and accuracy.

Re-installation of the servo drive unit is quick and simple, with no adjustment of gear positions required. The lens' front diameter is Φ136mm and it's also colour-matched for easy integration with results from all Canon EF Cinema lenses. Canon's renowned optical lens quality combines with support for industry-standard accessories, including matte boxes and 0.8- and 0.5-type gear module accessories such as follow focus units, to provide a truly versatile solution.

Equipment Discussions -

Canon launches EOS C100 Mark II camera with 1080/60p

Canon has announced the EOS C100 Mark II video camera to bolster its Cinema EOS lineup and has removed some of the pain points from the immensely popular C100 camera. The EOS C100 Mark II finally provides slow motion recording at Full HD 1080p at 60fps. Even the C300 doesn't have 1080/60p. The EOS C100 Mark II has a new Digic DV4 image processor which is powerful enough to offer the higher frame rates in Full HD. This camera builds on the previous C100 which was seen as a no nonsense workhorse camera. However, some people would definitely feel sad due to the lack of 4K.

Sensor: The C100 Mark II has the 8.3 Mega Pixel sensor in S35 format with ISOs from 320 to 80,000.
Processor: Digic DV4
Resolution: 1080p with max 60p for NTSC and 50p for PAL.

The C100 Mark II has a redesigned viewfinder with an OLED panel eliminating the viewfinder of C100 which was thoroughly panned by its users. The new C100 Mark II comes with Dual Pixel AF as standard with Face-detection AF.

The EOS C100 Mark II has built-in LUTs (Look up tables) which can be tweaked by users.
C100 Mark II has ability to record in AVCHD and MP4 formats.

The new C100 Mark II also has wireless file transfer (FTP) capabilities.
Weight: 2.5 pounds
Price: $5499 USD
Availability: December 2014

The Dual Pixel AF in conjunction with the face-detection AF would work better than only dual pixel AF as now can now move offcentre focusing via face detection is possible. However, have a touch screen LCD and select focus points would have been ideal, as I had mentioned earlier in the DPAF review of my C300 here

http://www.indiawilds.com/diary/cano...el-af-upgrade/

There is an internal mic like DSLRs. So one can have scratch audio to guide while lining up your separately recorded audio in the timeline. Or for those rare occasions when you are left with no alternative but to use the internal audio. The audio specs are the same as before i.e. 16bits and not 24bits.

Information from Canon

Canon announced today the Canon EOS C100 Mark II Digital Video Camera, the latest edition to the Canon Cinema EOS line of professional Super 35mm 8.3 megapixel CMOS cameras and the second-generation version of the popular Canon EOS C100 Digital Video Camera.

Designed for economical film and video productions such as documentary and remote broadcast crews, wedding and event coverage, indie film productions, as well as film schools and business and government users, the new EOS C100 Mark II Digital Video Camera, features advanced image processing, AVCHD and MP4 1920x1080/60p recording, uncompressed YCbCr output from HDMI, and many other new and enhanced capabilities for improved picture quality, operability, and convenient handling. Delivering a cinematic look with shallow depth of field and high sensitivity in low-light environments, the new EOS C100 Mark II camera weighs just 2.5 lbs. and is compatible with over 103 Canon EF Series lenses, including STM models which can deliver smooth and silent autofocus during filmmaking.
"Canon's commitment to the advancement of tools for visual expression takes another major step forward with the introduction of the EOS C100 Mark II Digital Video Camera," said Yuichi Ishizuka, president and COO of Canon U.S.A., Inc. "Drawing on input from Canon's global community of Cinema EOS camera users and from digital filmmakers using Canon EF lenses - 100 million of which have now been produced worldwide - the Company has added new capabilities to the EOS C100 Mark II from its predecessor that powerfully leverage our considerable expertise in optics, imaging, and digital signal processing. The result is an improved, affordable Super 35mm CMOS digital camera that is designed to provide outstanding HD image quality, operational performance, ergonomics, and workflow convenience."

Design Enhancements

Optimized for one-person operation, the new EOS C100 Mark II camera has a mobile core design enabling users to choose their preferred style of shooting. The existing design has been enhanced to include a large-size detachable eyecup for the camera's large 68-degree tilting 0.45-inch 1.23 megapixel color EVF (electronic viewfinder). Clearly marked red trigger buttons on the camera body, top handle, grip, and a built-in mono microphone on the camera body — for times when the top handle is not attached — can be used to capture basic sound for audio notation or as an aid to audio syncing during post.

Another major redesign of the new EOS C100 Mark II over its predecessor is an innovatively hinged 3.5-inch 1.23 megapixel OLED display panel, delivering 100 percent field-of-view coverage, wide color range support, and improved viewing even in bright sunshine. The new hinge design — which folds the panel shut when stowed, protecting the OLED surface — opens 180 degrees to reveal function keys and a joystick. The panel can open even further to 270 degrees to deploy against the side of the camera to provide monitoring for directors and other production personnel. Additional design improvements on the camera body include 17 assignable recessed function buttons, dual SD card slots with a transparent cover, and a simplified battery insertion and removal release.

Visual Expression

Previously available only as an optional upgrade for earlier Cinema EOS models, Dual Pixel CMOS AF is a standard feature on the new EOS C100 Mark II, providing enhanced autofocusing capability. The Dual Pixel CMOS AF technology helps provide smooth and consistent autofocus, so that focus transitions are natural looking and subjects can remain in focus even as they move off center. In addition, the compatibility of Dual Pixel CMOS AF with Canon EF autofocus lenses combines outstanding optical tools with a wide range of creative options. It's ideal for shooting sports, weddings and many more productions where focus pulling by a single operator is not feasible, such as when the video camera is attached to steadicams or drones. The EOS C100 Mark II Digital Video Camera also includes Face-Detection AF[ii], a first in the Cinema

EOS camera line, which utilizes contrast detection AF to maintain focus across most of the image plane, an advantage in one -person electronic news gathering (ENG) situations.

Imaging and Recording

Central to many of the new features of the new EOS C100 Mark II Digital Video Camera is its advanced Canon DIGIC DV4 image processor. The Canon DIGIC DV4 image processor separates the RGB output from the camera's 8.3 Megapixel CMOS imager into three individual 8 megapixel signals (as opposed to 2MB in the EOS C100) for noticeably improved image quality. The Canon DIGIC DV4 processor also includes a new delayering algorithm to help minimize moir, and reduce video noise even at high ISO speeds. (high-sensitivity recording on the camera ranges from ISO 320 to 80,000).

Another important benefit of the Canon DIGIC DV4 processor is Full HD recording in both the high-quality professional format AVCHD or the popular web-friendly MP4 format at a variety of bit rates (up to 28 Mbps and 35 Mbps, respectively), resolutions, and frame rates (up to the smooth look of 59.94p) to suit practically any production need· For special-effect requirements, slow and fast motion MP4 recording at up to 1920x1080/60p can also be performed.
Users can choose from multiple formats that support MP4 or AVCHD to suit a wide variety of production, post, and output needs. The EOS C100 Mark II camera's dual SD card slots can record in one or both formats simultaneously for back-up, or convert AVCHD and MP4 files into smaller MP4 files for web upload. Extended clip times can be achieved by recording continuously from one card to the other without a break. In addition, a Data Import Utility application is included that can seamlessly join divided files to help reduce work during editing and to import video file data from an SD card inside the camera or a card reader.

As with the other cameras in Canon's Cinema EOS line, the new EOS C100 Mark II Digital Video Camera includes Canon Log as a recording choice, providing maximum dynamic range for post-production color grading. New, however, is the addition of a built-in LUT (look-up table), enabling users to view the camera's live video signal in Wide DR (dynamic range) or the BT.709 (TV standard) color space on the OLED or any external monitor connected to the camera's locking HDMI® output (this feature can be turned off in the menu). Uncompressed video output (with time code data and 2:3 pull-down markers superimposed) can be output via HDMI to an external recorder.

Connectivity Innovations

The addition of wireless file-transfer capabilities further expands the versatility of the new EOS C100 Mark II camera for multiple production applications, including transferring time-critical news video or backing-up files. Utilizing dual 5 GHz and 2.4 GHz frequencies, the camera can transfer video files via FTP server for instant relay, or send MP4 video to the web browsers of laptops or tablets for viewing and storage (even on PC's lacking playback software). Remote control of the camera is also enabled via a compatible smartphone, tablet, or laptop. The new EOS C100 Mark II Digital Video Camera also includes compatibility with the optional multi-functional Canon RC-V100 Remote Controller, which can be used to adjust image quality and other important operations from a distance, a handy feature for shooting from a jib arm, drone, or other inaccessible location.
In addition, the optional Canon GP-E2 EOS GPS Receiver can be connected to the EOS C100 Mark II Digital Video Camera using a USB cable to record location and time information during shooting, a helpful feature for editing and archiving.

Pricing and Availability

The Canon EOS C100 Mark II Digital Video Camera is scheduled to be available at the end of December 2014 for an estimated retail price of $5,499.00.

Natural History -

COUNTRY NOTEBOOK: M.Krishnan: THE COMMON LANGUR

The Sunday Statesman: 31-Aug-2014 (shared by Shri. Saktipada Panigrahi)

"IF the Common Langur were less common, I am sure it would be thought one of the handsomest monkeys in the world. Elsewhere in Africa and South America, there are monkeys far brighter in colour and more picturesque in looks; even in India we have a monkey with a richer softer pelt and another with a cascading mane. But the contrast between the black of the langur's face and extremities and the grey of its coat is most pleasing and effective and a few other monkeys have such a dignified and distinguished bearing.

It is in the cold North in the foothills of the Himalayas that the Common Langur attains its best size and pelage - its thick coat is silvery grey there. In the South it is a smaller animal and its grey is no longer silvery but smoky warm shade. But everywhere the contrast between the grey of its coat and the black of its face, offset by a fringe and a peak of almost white hair, has a strong but sober contrast, lending the animal remarkable distinction. Moreover, no other monkey has such a graceful tail in action and repose.

So dark is the facial skin and so deep brown the eyes beneath the shading peak of hair that photographers find it extremely hard to get the features of the flat face in a direct front view. These sombre eyes, incidentally, amongst the sharpest in the jungles and generations of shikaris in India have been guided by their acuity when seeking to recover or follow up wounded tigers and panthers.

This brings us to an interesting question. As everyone knows, the guttural, hysterical swearing of langurs (and other monkeys) is usually a quite reliable sign that they have sighted a dreaded enemy (most probably a feline) but it is sometimes indulged in at other creatures and sights. Langurs will swear themselves hoarse when they see a dead panther being carried away, or even at a panther skin, and once I had the amusing experience to their reaction to a boldly-patterned black-and-yellow sari that my wife was wearing.

That sari was not marked in black, imitative rosettes on a tawny ground, but undoubtedly its pattern did suggest a panther's coat. We were motoring down a ghat road in an open car and passed several groups of langurs on tall roadside trees. All these monkeys are accustomed to the sight of passing humanity and cars but everyone of them swore at the sari !

I had the opportunity to observe closely the response of the Common Langurs to the appearance of a tiger on the scene. On seeing the tiger, they went up tall trees but were silent till their enemy approached their trees directly.

Then they started swearing, the vehemence of their demonstration and its abrupt cessation once the tiger passed on suggesting an uncontrollable reaction that is probably why these monkeys, which are not at all unintelligent, swear at the sight of a panther skin or even a "panther" sari - it is not that they cannot make out the difference between a panther and a human being but the sight of a too proximate appearance of the dreaded coat sets them swearing in uncontrollable fear and hate; remember that when they see a panther skulking through the bushes in poor light, what they would be seeing from their treetop stances would only be patches of skin. We are unquestionably the most intelligent of all living things but we have been known to act quite foolishly in a panic, at times fatally foolishly.

Panther and other big cat that hunt monkey depend on this panic-reaction for success in their hunting. They can never hope to catch the much lighter quarry if it stuck to the treetops - for one thing, the monkey could climb up slender branches that would snap under the hunter's weight. However, monkeys chased up a tree and with the hunter following them up the bole, or on demonstrating at them, leap down to earth and seek to escape by galloping to some other tree when the panther has no difficulty overtaking and pulling down a victim. I have never met anyone who has seen this happen but presume that on such occasions there were no nearby trees into the top of which the monkeys could leap.

Langurs are much more given to treetop life than the Macaques and their overdeveloped hind limbs serve them well in climbing and bounding from bough to bough. However, they are quite at home on the ground, too, and I have never seen them flipping up water from a hollow in a bole and branch and then licking the water from their palms, as macaques do at times. When they do need a drink, I presume langurs come down to the water, I have watched them drinking many times, crouching low to the edge of a pond or tank with the arms spread out and sipping the water.

Very little is known of the feeding habits of the Common Langurs in the wild state. They are said to be exclusively vegetarian but nowhere can I find a detailed account of their buds, fruits and tidbits. In many jungle-side villages and temples, these langurs live quite close to humanity. Those living in such places have a wonderful opportunity to observe and report the dietetic and social habits of these fascinating monkeys."

- M. Krishnan

This was first published on 22 September 1957 in The Sunday Statesman

IndiaWilds App for Android Mobile

In India most of the internet penetration is happening through mobile phones. And the existing users who have access to desktops and laptops are becoming much more mobile then they used to be a few years ago. So to raise awareness and reach out to more people we need to adapt ourselves and make IndiaWilds easily accessed through a mobile phone using android OS.

We have created a mobile phone app so that people can access IndiaWilds anytime, anywhere without being tied to a computer. No need to type. One can access at the click of a button.

We have developed this app through Business Compass LLC a company based in Randolph, New Jersey, United States so that we create a good app.

Awareness is the first step before a person can become a champion of wildlife. I hope this will help us in reaching out to more people to raise awareness and make a real impact on the conservation landscape. If you have an android device then please download the app from this link:

https://play.google.com/store/apps/details?id=com.businesscompassllc.indiawilds

Image of the Month -

The Honour for the Image of the Month September 2014 goes to the Image titled Jack-in-the box! by Abhishek Jamalabad
I liked the interesting perspective here. Full marks to the planning that went in creating this image.

Sharing the original text by Abhishek
"Indian monitor (juvenile)Varanus bengalensis | Masinagudi, Nilgiris
This monitor was extremely shy, and used to slip back into its burrow at the slightest movement on my part, even if saw my finger move across the dial. I did make some images from a distance shooting hand held, but a closer shot called for extreme measures. I set the camera up on my GorillaPod near the entrance to the burrow, and using the camera's USB cable, plugged in my mobile phone to help do the work. Since any movement near the camera would send the lizard straight back in, I captured this image using LiveView on the phone, even setting the EXIF values from the phone itself, while crouching a cable's length away from the setup. I used the 18-55 lens for better depth of field compared to the 100mm, because without focusing through the camera itself, I was sure I would miss the focus slightly. I had pre-focused to a point where I thought the lizard's eye would emerge, and used the phone to fine-tune the focus.
The focus and sharpness in this image are not the best. The lizard popped out only for a few seconds, and did not emerge again during my half hour wait.

Canon 500D, Canon 18-55mm IS at 53mm
SS 1/60
Av 16
ISO 400
EC -0.3
Full frame image
GorillaPod support
Remote operated using an Android phone & standard Canon USB cable with USB OTG adapter"

Wildlife Photography -

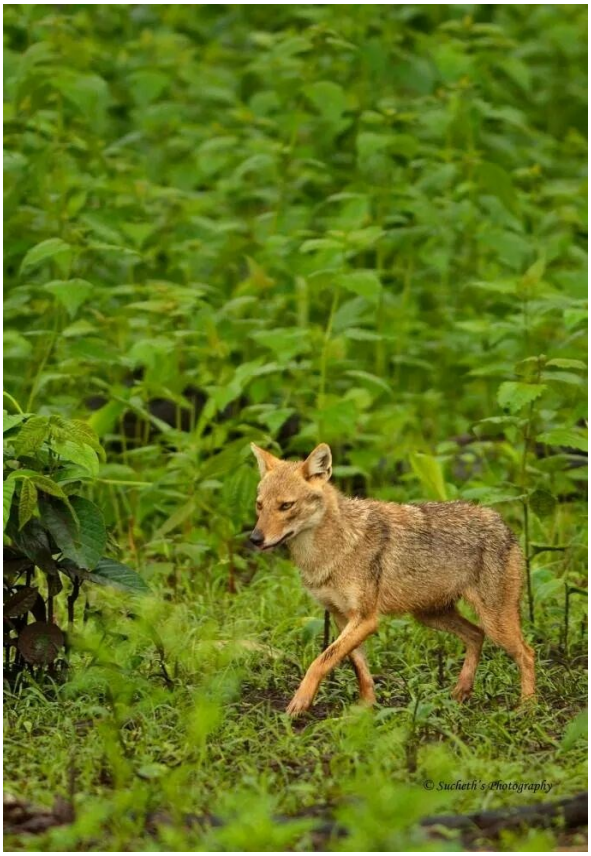
The Fables by Rajbir Oberoi

Gaur in Rain by Mrudul Godbole

Wildlife Photography -

Srilankan Frogmouth Male and Female by Shyamala Kumar

Jackal in Monsoon Greens by Sucheth Lingachar



Wildlife Photography -

Lanternfly by Abhishek Jamalabad

Centipede with eggs by Bibhav Behera

Wildlife Photography -

Changeable Hawk eagle with kill by Mrudul Godbole

I look forward to your inputs and support in preserving the last tracts of wilderness and wildlife left in our beautiful country. For other interesting articles and images check - ***http://www.indiawilds.com/forums/***

To post in the IndiaWilds forums, you can register free of cost using your Full Name as user id at ***http://www.indiawilds.com/forums/register.php***

If you are already a member of IndiaWilds and have forgotten you user id and/or password you can mail to administrator@indiawilds.com

Regards,
Sabyasachi Patra

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