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Cover Page Photograph:

Peeping Frog
by Prajwal Ullal

Exotic Fish Challenge to India's Biodiversity:

In 2018 Kerala had faced massive floods and landslides due to thoughtless constructions in the wetlands and river flood plains as well as changing the lay of the land in ecologically fragile areas. In 2019 the floods have repeated. The focus during and after the floods is to contain risk to human life as well as damage to property. However some of the ecological impacts are slowly unfolding in front of our eyes.

Many people have commercial fishponds where they cultivate exotic fish. During the Kerala floods, the alien fish from the fishponds were swept away into the rivers and lakes of Kerala. The alien fishes alligator gar (*Atractosteus spatula*) and arapaima (*Arapaima gigas*) are extremely harmful to the fresh water fishes and biodiversity of Kerala.

These two fishes can grow into huge sizes. The alligator gar can grow upto 10 feet long. Arapaima can grow more than 16 feet long. They will eat up and decimate the native fish species. In each ecosystem, there is a complex linkage between various species with multiple dependencies and interdependencies between species. Each species acts like a pillar in the ecosystem. So when one species is depleted or exterminated, then the balance in the ecosystem is shaken up. Our current science hasn't been able to study and document all these complex inter-relationships between species. By these unintentional introductions of large alien carnivorous fish, we are going to lose out on our rich biodiversity and we won't know what we lost.

The fishermen community which depends on fishing for livelihood will realise that their overall catch is falling. They will not know that these alien fishes are the cause. When one community becomes impoverished they will have to either look for other livelihood options and this often causes social strife. No country can progress when livelihoods are lost and there is social



Fisherman with aligator gar

Photo- Smrithy Raj



unrest. It is another matter that people often fail to pinpoint the cause of such unrest.

The entry of these alien fish is bound to impact the biodiversity negatively. How quickly these alien fish will impact will depend upon how many of them have escaped from the fish ponds into the wild. Unfortunately, this will never be known. So these fish may be happily multiplying in the various lakes and rivers before they become too numerous and simply decimate all other fish species.

This is not the first instance of fish species becoming invasive. A few decades ago when malaria was a big killer disease and the Government with the help of World Bank was fighting to contain this vector borne disease, many ideas were tried out. One of those was to introduce



Arapaima Large Photo Courtesy - online media

tiny fish called *Gambusia affinis* and guppy (*Poecilia reticulata*) so that these fishes eat up the mosquito larvae in the drains and small ponds where mosquitos breed. (National Action Plan on Invasives, IndiaWilds Newsletter Vo. 3 Issue 10, March 2010, <https://www.indiawilds.com/diary/indiawilds-newsletter-vol-3-issue-10/>)

I have seen people releasing their aquarium fish into the drains and ponds before going on a long vacation as the aquarium and fish would be left unattended for a long time. Some of these fish manage to survive in the ponds and waterways. We won't come to know the impact of such actions unless there are sufficient numbers of scientists

working on these aspects on long-term funded projects.

In order to increase fish production fisheries departments have encouraged cultivation of various imported fish species. Tilapia (*Oreochromis mossambicus*) was introduced in India in 1952. This species due to their prolific breeding and adaptability to wide range of conditions spread in all our rivers and posed a massive problem to mahseer and other native fish species in our rivers. Seven years later in 1959 a ban introduced on tilapia farming by the Fisheries Research Committee of India. In the '70s, Nile tilapia (*Oreochromis niloticus*) was introduced in India and its population has gone up in the various rivers. In 2005, River Yamuna harboured only negligible quantity of Nile tilapia, but in two years' time, its proportion has increased to about 3.5% of total fish species in the river. Presently in the Ganges River system, proportion of tilapia is about 7% of the total fish species. (Guidelines for responsible farming

of Tilapia in India, NFDB, Nov 2015, <http://nfdb.gov.in/PDF/GUIDELINES/1.%20Guidelines%20for%20Responsible%20Farming%20of%20Tilapia%20in%20India.pdf>)

Like tilapia, african catfish (*Clarias gariepinus*) too have gone wild. These carnivorous fish cause massive problems to the native species. A ban was imposed by the Government of India in 2013, however, even today people clandestinely cultivate it. There have been some effort to contain these populations of these species in some of the locations. (Hindu, July 02,2017; <https://www.thehindu.com/news/national/kerala/catfish-farming-banned-but-existing-stocks-pose-danger/article19234693.ece>) Unless existing catfish are caught and selectively culled, they will continue to pose challenges. A few years ago, Sultanpur National Park authorities dried up the water bodies so that all the African catfish can be eliminated. At that time there was a hue and cry from a few uninformed conservationists and laymen who felt we shouldn't be killing some species. Lack of scientific knowledge and misplaced concern for life is also harming India's fight for containing these invasive species.

Many of these alien fish are still being imported into India. However, the customs department doesn't have the requisite knowledge and information about these. So they blindly allow the import. It is not known if the customs officials in some regions are hand-in-glove with the importers. Unless a major effort is undertaken by the Government to ban all such import of invasive species, repeated circulars issued as well as well meaning NGOs and experts get involved with the customs department in tackling this problem, the illegal alien species imports will continue.

This is going to be a big question mark, because the Government despite its tall claims hasn't put in the much-needed effort to safeguard India's biodiversity. To compound the problems, the big NGOs and experts are yet to raise their voice consistently and effectively to educate the Central Government to come out with a National Mission on Invasives.

On the ground, the illegal fishponds cultivating alien fish need to be identified and action taken against them. Unfortunately,

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Arapaima
Rs 15,000/Pair [Get Latest Price](#)

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Color	Red
Brand	Arapaima
Minimum Order Quantity	2 Pair

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Fill the quantity to get late

Exotic Arapaima fish on sale online

ly, the police most of the times have other priorities. To make matters worse many of these fish pond owners are either politicians or are hand-in-glove with the politician-police nexus. So it would be a difficult task to break this nexus and ensure that India's biodiversity is protected. Raising awareness among the local police, forest department and fisheries department is another big challenge.

The situation is grim. However, we have to make a start somewhere. Perhaps the only people whose fight for their rights is benefitting biodiversity in this country is the fishermen community. In the past they have fought against the modification to the CRZ rules which allowed development of beachfronts. So if sufficient awareness can be raised among the fishermen communities in all the states, then perhaps a start can be made to fight against the menace of invasive fish species.

Article -

Small Wonderland: A world of Insects & Spiders

By - Amar Nayak

In this beautiful blue planet we are not the only intelligent species. There are many other intelligent species living on this Planet Earth. In fact they surround us and they manage to live with us. There are lots of tiny creatures living with us in our bedroom though we often fail to notice their presence. Many naturalists and wildlife enthusiasts too forget to count them in their wildlife notebooks! Photographers focus on clicking photographs of large mammals and birds. But wildlife photography means not only photography of huge, rare or vulnerable animals but also documenting the entire natural world. Remember the times when we as kids used to run around our backyard chasing butterflies? So as adults with a camera in hand, why not chase those colourful bugs and bees in our backyard? We are likely to find an astounding number of species waiting for a photo session in our backyard, if we keep our eyes and ears open then and if we know where and when to find them.

I had started my photographic journey with dragonflies and predictably my first love is clicking these tiny but colourful and incredibly interesting creatures. The following brief introduction to some of the commonly found species in our backyard may be of help to initiate others in such a journey.



© Amar Nayak/www.indiawilds.com

Damselfly

Dragonflies & Damselflies

Medium to big sized flies sometimes attracted by light and entered into our house. Most interesting fact about these insects is they sit on same place again and again. They love to eat, kill and eat hurriedly like hopper. The order Odonata (Pneuroptera) represents two sub-orders Anisoptera (Dragonflies) & Zygoptera (Damselflies). Odonates are one of the dominating aquatic (larval stage) & terrestrial (mature stage) insects, flying over ponds, streams, rivers, forest and meadows. Odonates spend maximum time of their life around water bodies. So the best place to observe an Odonate is near the water bodies. These fliers even can fly backward, move vertically like a helicopter or stop in turn in the midst of a most rapid progression. Dragonflies are strong fliers even they chase intruders. Damselflies are agile fliers and can be observed

Article -

throughout the year near water bodies. They are good predators of mosquitoes and flies.



Antlion:

Antlions are a group of insects of the family Myrmeleontidae. There are about 2,000 species, and the closest living relatives are the owl flies. The term "Antlion" applies to the larval form of the members of this family. The adult has two pairs of long, narrow, multi-veined wings in which the apical veins enclose regular oblong spaces, and a long, slender abdomen.

The Antlion larvae eat small arthropods (mainly ants), while the adults of some species eat small pollen and nectar. Antlions are active in evening like all Odonates. The adult Antlions are rarely seen in the day because it is typically active only in the evening, but they fly at night for mating! They are highly active in desert regions. Antlions are distributed worldwide. Antlions are easily distinguished from damselflies (Odonata) by their prominent, apically clubbed antennae which are about as long as head and thorax combined. Also the pattern of wing venation is different.



Article -

Owlfly:

Owlfly is a dragonfly-like insect belonging to the Zygoptera family and is in the order Neuroptera. They are considered as the closest relative of Antlion. Basic difference between Odonate & Owlfly is their bristle-like antennae which are found in Antlions too! Owlfly is a good flier although they spend most of their time in resting on a stem. Many of them hold their wings spread while resting like dragonflies. They hunt flying insects in their flight and feed on little insects. Some species of Owlfly are active in day & night both. Adults have large divided eyes which may be the source of their name – "owl fly"! Owl flies are worldwide in distribution.



Paper Wasp:

Paper wasps use their saliva and plant stem to make such nests. Paper wasps are widely distributed in India and belong to the Vespidae family.



Jewel Bug:

Jewel bugs (*Chrysocoris stollii*) belong to the Scutelleridae family. They are widely distributed in Indian bushes.



Jewel bugs are named for their brilliant colouration. Due to their colorful skin they are sometimes caught by designers.

Short-horned Grasshopper:

This is a picture of Locust swarming phase of certain species of Short-horned Grasshopper under Acrididae family. They are widely distributed. They tend enter our homes attracted by light at night.



Signature Spider:

Signature Spider (*Argiope* Sp.) is a species of Orb spiders of Araneidae family. It is named after its signature like zigzag pattern over its nest. Widely distributed in India, prefer to build their nest in small bushy areas. Good predator of small insects. This spider is also known as writing spider or garden spider.



Giant Wood Spider:

Giant Wood Spider (*Nephila pilipes*) is a species of Golden Orb-Web Spider, widely distributed in India & some other Asian countries like Japan, China, Vietnam, Cambodia, Taiwan, Singapore, Myanmar, Indonesia, Thailand, Laos, Philippines, Sri Lanka. Females are large in size and glowing. This spider weaves a big web in small forest or in Indian gardens. A good predator of bees, butterflies, dragonflies, moths even small birds.



Conservation News -

Three Elephants mowed down in NH-20 in Odisha:

Two elephants were killed by a speeding truck in Odisha. In the Ghatagaon forest range in Keonjhar district in Odisha, a herd of about 10 elephants were crossing a road late in the night near Balijodi. Initial reports suggested that a speeding truck hit three elephants out of which two died and the third is critically injured. One of the dead elephants is a calf and the injured elephant is a female.

The speeding truck after hitting the elephants over turned. The driver have fled the spot after this incident. The local villagers informed the forest department officials about this sad incident. People blamed the heavy trucks of mining companies which are relentlessly plying in the night for causing major problems for the elephants. It becomes very difficult for a medium sized herd to safely cross the road when trucks are speeding on the road. The momentum of the heavy trucks inflict fatal injuries to the elephants. However the forest department absolved the truck driver as well as the mining company by saying that most probably the truck overturned by hitting the elephant carcass later. The forest department apportioned the blame on a bus driver and have arrested him.

The Keonjhar DFO has reportedly blamed the elephants for not using an underpass which is 1 kilometer from the accident spot. Instead of blaming the elephants, one needs to understand that the underpass created as a mitigation measure is completely wrong and inadequate.

In some of these roads there are some signs indicating that it is elephant zone. However, these signs are not mostly visible, especially in the night. Despite seeing the signs people do drive fast when they see good roads to save time. So it is very important that on established elephant corridors, there has to be well designed mitigation measures like elevated highways for certain sections. Elephant is a big animal and needs space. Well designed spacious underpass works if the elevation is right. On a flat road, creating an underpass at one spot doesn't work. Elephants will use any one part of the corridor to cross the road. This incident clearly shows that there is a need for a big elevated road in that stretch.

Odisha has become killing fields for elephants. Every few months elephants are dying either by speeding trucks or trains or due to electrocution. We have strong laws. However, our laws are never enforced. So our wildlife suffers. Unless there is concerted effort from the State Government, Union Government as well as other stakeholders, elephants will continue to die violent deaths in Odisha.



Conservation News -

Government waives off lease rent for Wind power projects:

The Ministry of Environment, Forest and Climate change has decided to relax the mandatory charging of lease rent of Rs. 30,000/- per MW for wind power projects.

In a review meeting Union Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar took a conscious decision to relax the condition of charging the lease rent of Rs. 30,000/- per MW for wind power projects. Shri Javadekar said that it is expected that this step will boost the investment in wind power projects and will help in providing wind power at cheaper rate.

The Union Environment minister said “The government envisages to meet maximum energy requirement by tapping renewable energy resources and, to achieve the target of clean energy in a time bound manner, various policies and regulations are being constantly updated.”

The present procedures to establish wind power project over forest land requires payment of mandatory charges for compensatory afforestation and Net Present value (NPV). In addition to mandatory charges, the wind power companies had to pay additional lease rent of 30,000 per MW. This additional cost is not mandatory for other renewable energy projects such as solar power and hydel electric projects. Additional cost for generation of clean energy through wind power, in turn escalate the per unit cost of power at consumer level.

Unfortunately, equating wind power projects which require vast area and are often in forest land shouldn't be compared with Solar power projects. Though branded as clean energy, there is a huge environmental downside to the wind power projects. The areas where these massive windmills are present, one can find lot of bird mortalities. It is true throughout the world. Researchers in Kutch and Karnataka have proven that there are huge number of bird mortalities due to wind mill.

<https://www.indiawilds.com/forums/showthread.php?19195>

The other difference is that solar can come up in any land which gets sunshine and India is blessed with abundant sunshine. However, windmills have to come up in areas where the wind is abundant and the blades rotate by the wind so that power can be generated. Most of these come up in non-human habitations ie. in forest lands and in other ecologically fragile lands.

The cost of Solar is getting cheaper by the day. There has been new developments in solar technology like thin solar films which can be pasted even in windows. So providing concessions to Wind mill sector which has a huge environmental cost is not a good move at all from this Government.

Conservation News -

BASIC countries to play an important role in making Paris agreement accepted in letter and spirit by the World: Union Environment Minister

In the run-up to the United Nations Framework for Climate Change (UNFCCC) Conference of Parties (COP-25) meet to be held later in the year from 2nd to 13th December, the BASIC countries held its 28th Ministerial meeting on Climate Change from 14th to 16th August in Sao Paulo, Brazil.

India which was represented by Union Minister for Environment, Forest and Climate Change, Shri Prakash Javadekar said that BASIC countries jointly putting views is an important aspect of UN negotiations.

“Brazil, South Africa, India and China put together has one-third of world’s geographical area and nearly 40% of the world’s population and when we speak in one voice shows our determination. The BASIC Group could play an important part in making Paris agreement accepted by all the countries in its true letter and spirit”, stressed Shri Javadekar.



Shri Javadekar further added that BASIC will be united and by the joint statement issued today has highlighted all the issues which are relevant today and hence the world must take note of what BASIC is saying.

The text of the joint statement follows :-

Joint Statement issued at the conclusion of the 28th BASIC Ministerial Meeting on Climate Change, São Paulo, Brazil, 16 August 2019:

1. The 28th BASIC Ministerial Meeting on Climate Change was held in Brasília and São Paulo, Brazil, on 14 and 16 August 2019. The meeting was chaired by H.E. Mr. Ricardo Salles, Minister of the Environment of Brazil and attended by H.E. Mr. XIE Zhenhua, Special Representative for Climate Change Affairs of the People’s Republic of China, H.E. Ms. Barbara Creecy, Minister of Environment, Forestry and Fisheries of the Republic of South Africa, and H.E. Mr. Prakash Javadekar, Minister for Environment, Forest and Climate Change of the Republic of India.

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2. The BASIC Ministers expressed their concern for climate change and its adverse effects and reaffirmed their commitment to the successful implementation of the United Nations Framework Convention on Climate Change (UNFCCC), its Kyoto Protocol and its Paris Agreement, based on the recognition of the needs and special circumstances of developing countries and in accordance with the principles of Equity and Common But Differentiated Responsibilities and Respective Capabilities (CBDR-RC), in the light of different national circumstances. Ministers stated the importance of responsible, comprehensive, urgent and ambitious actions against climate change, including in the urban environment.

3. The Ministers stressed their support for the UNFCCC and its instruments, which remain the preeminent international forum for negotiating and addressing matters related to climate change. The BASIC countries reiterated their support for multilateralism, having made constructive engagements and significant contributions towards a series of milestones under the UNFCCC. They highlighted their determination to continue to work together with other Parties to further the process under the UNFCCC, which is irreversible.

4. Ministers underlined that BASIC countries are implementing ambitious climate action both in the pre-2020 period and in their proposed NDCs, having achieved substantial progress, notwithstanding the multiple challenges they face in terms of social and economic development and poverty eradication. They are committed to sharing best practices and supporting each other through south-south cooperation as they further develop their domestic climate policies and actions. They underscored that global climate action must promote climate justice by recognition of the fundamental right of all people in accessing economic growth and sustainable development.

5. Ministers took note of the synthesis report on pre-2020 implementation and ambition published by the UNFCCC Secretariat in September 2018. The Ministers highlighted the significant gaps in pre-2020 climate efforts not only in mitigation, but also in adaptation and support to developing countries. They underlined that time is of the essence for any meaningful pre-2020 action and that the implementation gaps should not present a burden to developing countries in the post-2020 period. They also urged developed countries to undertake ambitious actions to reduce emissions and fulfill their finance commitments, including in the pre-2020 period, in light of their historical responsibilities.

6. The 185 ratifications, to date, of the Paris Agreement were welcomed by BASIC Ministers. They called on all remaining Parties to UNFCCC to join the Paris Agreement as soon as possible. Ministers also welcomed the 130 ratifications, to date, of the Doha Amendment to the Kyoto Protocol and recalled that only 14 acceptance instruments are outstanding for the amendment to enter into force. They urged Parties that have not yet done so to ratify the Doha Amendment to the Kyoto Protocol as soon as possible, to ensure its prompt entry into force, given the valuable contribution it could make to global climate action leading up to 2020.

7. Ministers appreciated the role of the Polish Presidency, commending its contribution to the UNFCCC process, particularly the decisions adopted in Katowice, during COP 24, CMP 14 and CMA 1, including the bulk of the Paris Agreement Work Programme. They pledged the group's full support to the incoming Chilean Presidency of COP 25 and emphasized the importance of moving forward and reaching concrete results in Santiago, which is a crucial opportunity for closing the action

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and ambition gaps before 2020.

8. Ministers reiterated their commitment to work together with all Parties in an open, transparent, inclusive and Party-driven manner to achieve a balanced and comprehensive outcome on all remaining items of the Paris Agreement Work Programme.

9. Ministers emphasized that the UNSG's Climate Action Summit, to be held in September of this year, should be fully respectful of the principles and provisions of the UNFCCC, its Kyoto Protocol and its Paris Agreement, as well as existing aims, targets and mandates. They look forward for the Summit to send a strong political signal for global low-carbon, climate resilient and sustainable development and produce positive outcomes for pre-2020 ambition and implementation support for developing countries. The Ministers applauded the UN Secretary General's efforts to build political momentum for enhancing climate action and support.

10. Ministers took note of the findings of the Intergovernmental Panel on Climate Change (IPCC) Special Report on global warming of 1.5 °C and the Special Report on Climate Change and Land, which highlights the high vulnerability of developing countries to climate change effects, high resultant costs of adaptation and unprecedented transitions required in the development process.

11. Ministers urged developed countries to provide adequate and predictable means of implementation to developing countries to enable them to achieve their climate goals. In this respect, developed countries are called upon to enhance support to developing countries for actions related to project or programme development and implementation, including on adaptation, mitigation and transparency. This must be done through adequate provision of finance, technology transfer, and capacity building to facilitate the effective implementation of the Convention, its Kyoto Protocol and its Paris Agreement.

12. Ministers reaffirmed that adaptation is a key imperative for developing countries and requires an urgent global response. They emphasized the importance of the provision of enhanced as well as predictable support for adaptation from developed countries to developing countries, recognizing the adaptation efforts of developing country Parties.

13. Ministers stressed that the enhanced transparency framework established by the Paris Agreement should facilitate exchange of information, best practices, as well as address the needs faced by developing countries, ensuring the required flexibility. Ministers underlined the significant challenges of developing countries on transparency-related capacities and urged developed countries to provide new, additional, adequate and timely finance support in this regard.

14. Ministers noted with concern the trend of developing countries being denied their right to support in different fora, including the Green Climate Fund (GCF) and the Global Environment Facility (GEF). They stressed in this regard that climate finance should not be a vehicle for increasing the indebtedness of developing countries.

15. The BASIC Ministers urged developed countries to fulfill their climate finance commitments of mobilizing USD 100 billion annually by 2020 for developing countries in a transparent manner and on a grant basis. This support should be

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new and additional, and over and above their 0.7% of GNP commitment with respect to Official Development Assistance (ODA). They noted with concern the insufficiency and inadequacy of the support provided by developed countries to date.

16. They stressed that the 2020 deliberations on the new collective quantified goal on finance should be based on the lessons drawn from experience relating to meeting the USD 100 billion pledge, informed by the needs of developing countries and adequate to meet the ambition. In this regard, they stressed the importance of establishing a structured deliberation within the UNFCCC, in order to conclude this work.

17. Ministers restated that a new collective quantified goal on finance by developed countries, with a significant publicly funded component, is one of the crucial signals that the regime under the UNFCCC must give to investors, both public and private, in order to match the urgency of climate change. Securing scaled-up, adequate and proper means and resources for developing countries is indispensable to enable them to meet their commitments and implement the Paris Agreement.

18. Ministers expressed the expectation that the first replenishment of the Green Climate Fund by the end of 2019 will double the initial resource mobilization pledge, ensuring that financial contributions by developed countries match the ambition, needs and priorities of developing countries.

19. The BASIC group underscored the importance of concluding the discussions on Article 6 of the Paris Agreement, one of the remaining issues from the Katowice package of decisions, which will assist those participating in implementing the Agreement in a cost effective manner. The Ministers recalled that decisions on other subjects should not pre-empt discussions under Article 6 and expressed their expectation of reaching a satisfactory outcome on this matter in December, at the Santiago COP. They underlined that Parties should address the Article 6 issues in a balanced and inclusive manner, including the issue of transition of projects under the Clean Development Mechanism. They highlighted that Parties have a strong foundation for future work on Article 6 and that it is important to conclude work in accordance with the mandates set out in the Paris Agreement and the accompanying decision.

20. Ministers noted the work of International Maritime Organization (IMO) and International Civil Aviation (ICAO) on reduction of carbon emissions and underscored that work being undertaken by IMO and ICAO must complement the UNFCCC, its Kyoto Protocol and its Paris Agreement and conform to their key principles, in particular Equity and CBDR-RC.

21. Ministers highlighted the importance of mechanisms on loss and damage under the UNFCCC and urged developed country Parties to provide funding for loss and damage arising from climate change in developing countries.

22. BASIC Ministers reiterated their unequivocal commitment to support the State of Palestine, as the Chair of the Group of 77 and China, with a view to strengthening the unity of the Group of 77 and China and advancing the common interests of developing countries.

23. Ministers welcomed the offer of China to host the 29th BASIC Ministerial Meeting.

Equipment Discussions -

Blackmagic Design announces 6K Pocket Cinema camera with EF mount

Blackmagic Design has announced an updated offering to its Pocket Cinema Camera lineup by announcing a 6K Pocket cinema camera with an EF mount. It features a larger 6144 x 3456 Super 35 sensor and EF lens mount. So now the Blackmagic Pocket Cinema Camera 6K can be used with all our larger EF photographic lenses to create cinematic images with shallower depth of field, allowing creative defocussed backgrounds and gorgeous bokeh effects! The extra resolution also gives scope for reframing during editing and color correction. This means that you can shoot in 6K and then in post production zoom and reframe to allow wide shots and close ups to be created, all from a single camera and without losing image quality!



Lightweight CarbonFiber Polycarbonate Composite

The Blackmagic Pocket Cinema Camera has a miniaturized, handheld design with lot of high end features. Made from lightweight carbon fiber polycarbonate composite, the camera features a multifunction handgrip with all controls for recording, ISO, WB and shutter angle right at your fingertips. According to Blackmagic the sensor is designed to reduce thermal noise allowing cleaner shadows and higher ISO. The large 5 inch LCD makes it possible to easily get critical focus at 6K resolutions. The battery door is removable. There are 4 shock proof microphones, heavy duty EF lens mount and built in speaker.

Multifunction Gripwith Fingertip Controls!

The multifunction handgrip features a comfortable and familiar design that puts important functions such as ISO, WB and shutter buttons right at your fingertips. There's even a scroll wheel under your index finger for making quick iris adjustments! You get additional controls that go beyond those found on a DSLR, which means you don't have to go hunting through menus on a tiny screen to find a command!

The Blackmagic Pocket Cinema Camera features easy to reach recording and still buttons that are placed exactly where you

Equipment Discussions -

expect them to be, including user assignable function keys and control buttons for high frame rate, focus zoom, menu operation, playback and more.



Fingertip Shooting Controls

The front and top of the Blackmagic Pocket Cinema Camera features record start/stop and still photo buttons along with dedicated controls for iris, ISO, white balance and shutter speed. The main power switch is located on the top next to a row of 3 customizable function buttons.

Shoot Incredible HighDynamic Range (HDR) Images

The distance between the lightest and the darkest parts of an image is called dynamic range and is measured in stops.

Blackmagic Pocket Cinema Camera 6K has 13 stops of dynamic range. If true then it is much better than the DSLRs and average video cameras in preserving more detail in the lightest and darkest areas of an image. This allows you to set exposure for an indoor scene such as a cafe and still retain the details of bright outdoor light coming through a window. You even get more colors than the standard DCI-P3 colorspace used for feature films.

Also, as a part of its strategy Blackmagic is giving DaVinci Resolve Studio software free with its cameras. With the Blackmagic 6K pocket camera purchase you will also get a official copy of DaVinci Resolve Studio software for free.

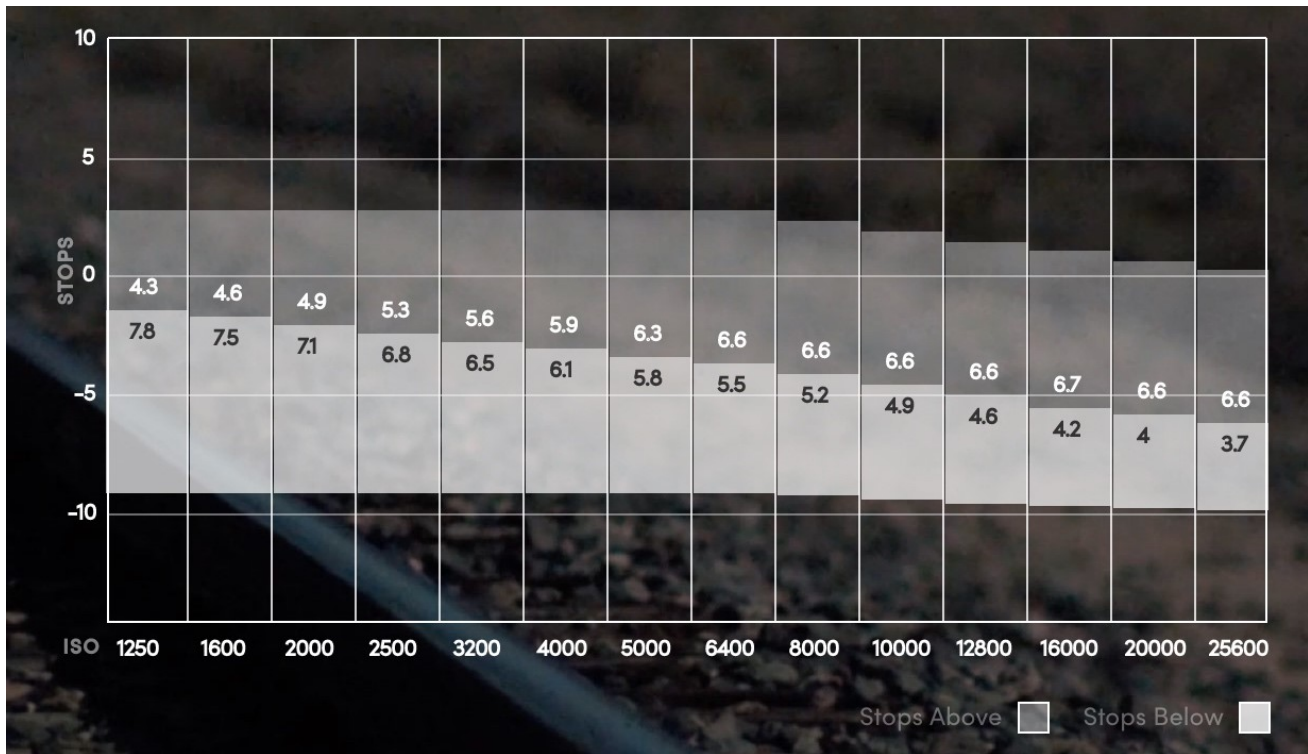
Dual Gain ISO for Exceptional Low Light Performance

The Blackmagic 6K Pocket Cinema Camera features dual gain ISO up to 25,600, which means there will be minimum grain or noise in images, while maintaining the full dynamic range of the sensor. The native ISO of 400 is ideal for scenes with on-set lighting. The secondary high base ISO of 3200 is perfect when shooting in dimly lit environments. The gain is set automatically as you adjust the ISO setting on the camera, so it's easy to capture great images when you don't have time

Equipment Discussions -

to set up lights.

Dual Native ISO at 3200 BMD 6K Pocket Camera



Multiple Resolutions and Frame Rates

Depending on the model, the Blackmagic Pocket Cinema Camera can shoot in all standard resolutions and frame rates from HD up to DCI 4K and even 6K. You can also shoot still photos at 21.2 megapixels on the 6K model. The new 6K model will shoot up to 50 fps at 6144 x 3456 16:9 or 60 fps at 6144 x 2560 2.4:1 and 60 fps at 5744 x 3024 17:9.

For higher frame rates you can window the sensor and shoot up to 120 fps at 2.8K 2868 x 1512 17:9. You can even work in true anamorphic 6:5 using anamorphic lenses in 3.7K 60 fps at 3624 x 3020.

Use Standard SD Cards, UHS-II or CFast 2.0 Media!

The Blackmagic Pocket Cinema Camera features built in CFast and SD UHS-II card recorders, and a USB-C expansion port for recording direct to an external media disk. You can use regular SD cards for HD or higher performance UHS-II and CFast cards for native 4K or 6K when using Blackmagic RAW.

Even an hour of full resolution 6K images on a single 256GB SD UHS-II card can be captured. The ProRes and Blackmagic RAW files work with all video software.

The Quality of RAW and the Speed of Video!

Blackmagic RAW is a revolutionary new format designed to capture and preserve the quality of the sensor data from your

Equipment Discussions -

camera. Video formats such as H.264 are highly compressed, plus add noise and weird artifacts, causing original sensor detail to be lost forever. Blackmagic RAW eliminates this problem and gives you stunning images with incredible detail and color throughout the production pipeline from camera to edit, color and mastering. It also saves camera settings as metadata so you can set ISO, white balance and exposure in camera or override them later while editing, all without any loss of quality! Only Blackmagic RAW gives you the highest quality, smallest files and fastest performance!

Large 5" Touchscreen for Fast and Accurate Focus

The rear of the Blackmagic Pocket Cinema Camera features a large, bright 5 inch touchscreen that makes it easy for you to frame shots and accurately focus. That means you don't have to carry around an external monitor or viewfinder. It's like getting a built in Blackmagic Video Assist with your camera! The touchscreen displays critical information while you're shooting, menus for setting up the camera and intuitive touch to focus controls. On screen overlays show status, a histogram, focus and peaking indicators, levels, frame guides, playback controls and more. You can quickly apply 3D LUTs for monitoring shots with the desired color and look, or you can choose to bake it into the recorded footage.

The Advanced OS with Features from URSA Mini Pro!

With the advanced Blackmagic OS, you get an intuitive and user friendly camera operating system based on the latest technology. Blackmagic OS is a true modern operating system where all camera features run independently for smoother control, plus the camera powers on virtually instantly. It features the same controls and menus as other Blackmagic Design cameras so you can move between cameras on set easily. The interface uses simple tap and swipe gestures to adjust settings, add metadata and view recording status. You also get full control over advanced camera features such as on screen focus and exposure tools, 3D LUTs, HDR, metadata entry, timecode, Blackmagic RAW settings and more!

Generation 4 Color Science

Stunning Skin Tones and Faithful Color Reproduction

Featuring the same Generation 4 Color Science as the high end URSA Mini Pro G2, the Pocket Cinema Camera delivers stunning, accurate skin tones and faithful color in every shot. Blackmagic Generation 4 Color Science uses a complex dynamic 12-bit gamma curve designed to capture more color data in the highlights and shadows, so you get better looking images. The color science also handles some of the complex Blackmagic RAW image processing, so color and dynamic range data from the sensor is preserved via metadata which you can use in post production. That means you get images that have a natural, film like response to color adjustments in post with DaVinci Resolve Studio.

Professional Connections for Custom Rigs!

Though small and portable, the Blackmagic Pocket Cinema Camera features a wide range of connections for audio, monitoring, power and more. The camera includes a full size HDMI connector for monitoring with support for HDR and clean 10-bit output.

Equipment Discussions -

That means you can connect an HDMI display or television for on set monitoring of images, with or without overlays that show critical information and camera status. There's also a mini XLR connection with 48 volt phantom power for attaching professional microphones, a 3.5 mm video camera style microphone input, headphone connection and a professional locking DC power connector! The USB-C connection lets you connect and record direct to your media disk!

Microphone Input

2. 3.5mm Stereo Output

3.Fullsize HDMI Connector

4.DC Power

5.USB Expansion Port 6. XLR Audio Connection

4 Built-in Microphones and Professional Audio Inputs

With professional, high fidelity audio recording built in you'll never have to carry around a separate sound recorder again! Both Blackmagic Pocket Cinema Camera models feature a mini XLR input with 48 volts of phantom power for connecting professional microphones such as lapel mics and booms. The four built in microphones have an extremely low noise floor and are shock and wind resistant, allowing you to capture great sound in any location. There's also a 3.5mm audio input for connecting video camera style microphones, along with a built in speaker for playback and a 3.5mm headphone jack.



Load Custom 3D LUTs to Recreate Film Looks!

Digital film cameras shoot logarithmic colorspace to preserve the dynamic range, which is great for later post production, however when these files are viewed on a monitor they can look flat and washed out. 3D LUTs solve this problem because they allow you to apply a "look" to the monitor so you get an idea of how the finished images will look like when editing. LUTs can be applied temporarily for monitoring only, or they can be recorded into the Blackmagic RAW files for use in post production. The Pocket Cinema Camera works with industry standard 17 and 33 point 3D LUT files, or you can work with the built in LUTs such as Extended Video, Film to Video, Film to Rec.2020 and more.

USB-C for Recording Direct to External Media Disks

The Blackmagic Pocket Cinema Camera features an innovative and high speed USB-C Expansion Port that operates at up to 5 Gb/s. USB-C is available on most new computers and even provides power. That means you can connect external accessories such as flash drives and SSDs for significantly longer recording times. A high speed external disk allows shooting 6K in the highest constant quality 12-bit Blackmagic RAW in the Q0 setting or at high frame rates. Best of all, when shooting is complete you can simply move the external disk to your computer and start editing and color correction from the

Equipment Discussions -

same disk, eliminating file copying.

Blackmagic Pocket Cinema Camera 6K (12:1)

	250GB	500GB	1TB
24fps	65 mins	130 mins	260 mins
60fps	30 mins	60 mins	120 mins

Built-In Timecode Generator

Get Fast Multi Camera Shoots in Perfect Sync!

Professional cameras include professional features and you also get a built in timecode generator, allowing shooting with more than one camera while keeping perfect sync! Simply plug in an external timecode generator such as Tentacle Sync into the 3.5 mm audio jack and the camera will automatically detect timecode and lock the internal generator. Now each camera can start and stop recording and all the shots from all cameras will have the same matched timecode. Imagine shooting a music festival with multiple roving cameras! Best of all the new DaVinci Resolve 16.1 will automatically find and sync the shots from all cameras so you don't need to waste time sorting through thousands of shots!

Shoot Still Frames up to 21.2 Megapixels!

In addition to shooting video, the Blackmagic Pocket Cinema Camera can also capture high resolution stills. Simply press the dedicated stills button to record 21.2 megapixel images on the 6K model or 8 megapixel images on the 4K model. Still images are saved as fully uncompressed DNG frames, so you get the maximum image quality, which is perfect for making professional prints. Capturing still images is great for keeping track of continuity between shots or for sharing images to get approval from clients that are not on set.

Wireless Bluetooth Camera Remote Control

If you're positioning the camera on the end of a boom, or in another hard to reach location, you can get full control via Bluetooth from up to 30 feet away. You can download the Blackmagic Camera Control app for your iPad or use third party apps such as Bluetooth+ or tRigger on your iOS and Android devices. There's even a free developer SDK with sample code available from the Blackmagic Design developer website, so you can create your own remote camera control and digital slate solutions! Imagine building an app that can jam sync timecode and trigger all cameras to record at the same time. The possibilities are endless!

Power from Batteries and 12V DC or Recharge via USB-C!

The Blackmagic Pocket Cinema Camera uses standard removable LP-E6 type batteries and also features a locking DC

Equipment Discussions -

power connector so you never have to worry about losing power in the middle of a shoot. The included AC plug pack can power the camera and charge the battery at the same time. You also get a set of international socket adapters so you can travel and use it worldwide. The USB-C expansion port can also be used to charge the battery from portable battery packs, mobile phone chargers or a laptop computer. You can even add an optional Blackmagic Pocket Battery Grip that lets you use 2 batteries to dramatically extend the power of the camera. That's the widest range of power options so you can shoot all day!

Includes DaVinci Resolve Studio

Get Professional Editing, Color Correction, Audio Post and VFX!

Blackmagic Pocket Cinema Camera 4K and 6K models include a full version of DaVinci Resolve Studio, which is the same software used in Hollywood for creating high end feature films, episodic television shows, commercials and more. DaVinci Resolve features a revolutionary new cut page with intelligent editing tools and innovative new features designed to help you quickly find the footage you want, edit it together and output it fast. In addition to the new cut page, you also get DaVinci's legendary professional editing, advanced color correction, audio post and visual effects tools, all in a single software application! Now you can use the same high end software that professional editors and colorists use!

Price: \$2495 USD

B&H Link: https://www.bhphotovideo.com/c/product/1499529-REG/blackmagic_design_cinecam6k_blackmagic_design_pocket_cinema.html/BI/19990/KBID/13252

Equipment Discussions -

RODE announces Lavalier GO microphone for wireless GO system

RODE has announced an addition to its Wireless GO system in form of a lavalier microphone.

Lavalier GO is designed as a professional-grade wearable microphone. It can be used in a wide range of applications. The 3.5mm TRS connector is designed to pair perfectly with the RØDE Wireless GO and most recording devices with a 3.5mm TRS microphone input.



Lavalier GO is designed to perform excellently in any broadcast application. It features a discreet 4.5mm omnidirectional microphone. It would be pertinent to mention that the omni directional microphones are important because when the talent turns his head, the omni directional mic will still pick up the signal. The RØDE Lavalier GO microphone delivers crystal clear audio in all environments and is incredibly forgiving when it comes to placement on talent, allowing for greater flexibility in fast-paced situations.

A foam pop shield is supplied with the Lavalier GO microphone to minimise the wind noise and vocal plosives (hard 'b', 't' and 'p' sounds), as well as a durable mounting clip with in-built cable management for quick and easy rigging. It also features a hard-wearing Kevlar® reinforced cable, designed to withstand the rigours of any shoot.

Equipment Discussions -

Lavalier GO microphone Features:

The following are the features of the RODE Lavalier GO microphone:

- Professional-grade lavalier mic with 3.5mm TRS jack
- High-quality omnidirectional condenser capsule
- Discreet 4.5mm miniature microphone
- Kevlar® reinforced cable
- Includes pop shield and durable mounting clip

Lavalier GO Specifications

Acoustic Principle	Permanently Polarised Condenser
Polar Pattern	Omni-directional
Frequency Range	20Hz - 20kHz
Output Impedance	3k Ω Typical
Signal to noise Ratio	67 dB
Equivalent Noise	27 dB Typical
Maximum SPL	110 dB
Sensitivity	-35dB (17.8mV @94dB SPL)
Dynamic Range	83dB Typical
Power Requirements	Powered from plug-in power TRS socket (2.7V)
Output Connection	Gold-plated TRS plug

Pricing:

The *Lavalier GO wireless microphone* is priced at **\$79 US dollars**. At this price, enthusiasts, vbloggers etc should be able to afford and use it.

Equipment Discussions -

Elinchrom announces the ELM8 continuous LED light:

Elinchrom has released the ELM8 continuous LED light. Manufactured by Light & Motion with Elinchrom, the ELM8 is the most portable, powerful and progressive modular system of point source continuous LED lights.



Elinchrom + Light & Motion

Known for providing photographers with premium lighting solutions including a collection of world-class light shaping tools, Elinchrom has become an iconic brand in the photographic world.

Light & Motion, one of the most forward-thinking LED light manufacturers, has brought their game-changing technology to the broadcast and video world with a range of ultra-portable, powerful, robust continuous lights.

Cordless LED continuous light with complete EL integration

Small, powerful and cordless, the ELM8 is the most versatile continuous LED light on the market. Complete integration with Elinchrom's unique system and light shaping tools makes the ELM8 the perfect match for Elinchrom users' existing lighting kit. With its rugged and compact design, the ELM8 allows freedom to shoot anywhere, anytime and in any weather conditions.

Equipment Discussions -

Capture What You See

With an outstanding light output of 8000 lumens, the ELM8 provides a consistent, beautiful beam with precise color, making it the ideal light for photo & video creators demanding minimal weight with remarkable power.

Shape & Control Your Light

Extend the use of your gear and benefit from Elinchrom's unique light-shaping accessories. A new Elinchrom Remote Control dedicated to continuous light is available to conveniently manage the lights' settings from the camera/monitor, in any environment, allowing content creators everywhere to work efficiently.



ELM8 Specifications:

- CRI - 93
- TLCI - 94
- Color Temp - 5600 K
- LUX - 16320 (at 1m w/Fresnel)
- Light Output - 8000 Lumens
- Native Beam Angle - 120°

Equipment Discussions -

- Water Resistance - IP54
- Impact Resistance - 1 m
- Runtime - 50 to 245 min
- Weight - 1.2 kg (2.645 lbs)
- Charge Time - 2 hrs (full charge)
- Size - 20.5 x 9.6 x 9.6 cm (with battery)
- Radio Control - Skyport Protocol
- 20 Frequencies / 4 Groups
- Distance Range - up to 100 m

ELM8 Accessories:

The ELM8 continuous LED light comes with optional accessories like barn doors, diffusers, freshnels, remote control, international micro-USB charger kit etc.



Availability:

The Elinchrom ELM8 has been available since 5th of August 2019.

Price: \$1699 US Dollars

India price to be announced later.

Natural History -

COUNTRY NOTEBOOK: Monkeying in the deep : M.Krishnan:- 18 October 1970

The Sunday Statesman (shared by Shri. Saktipada Panigrahi)

MONKEYING IN THE DEEP (Swimming ability)

" THE MACAQUES as a family, are good swimmers. The Rhesus, the most familiar monkey of the North, does not take to water, can even swim submerged for some distance. Once I saw a Rhesus plunge into the water and swim about 10 yards submerged before surfacing and have many times seen these monkeys actually preferring a short cut across water to skirting a large pool, when at some convenient point the farther bank was near. They are not afraid of deep water, but take care to avoid strong currents.



Rhesus Monkey drinking

Photographed By - Saktipada Panigrahi

Many people must have read newspaper accounts of a big Rhesus Monkey that plunged into a lake to rescue a human child that had fallen in. I was unable to verify this story, but see nothing intrinsically impossible in it. An unreasoned, instinctive urge to rescue an infant of its own kind in similar circumstances might well have been extended to a human infant.

My picture will prove that the Bonnet Monkey, the commonest monkey of the South and a macaque, is also a strong swimmer and does not hesitate to carry its baby with it while swimming, riding high piggy back and not clasped to the abdomen as usual, naturally not! The she-monkey was crossing a deep, wide temple pond when I took the picture.

Nothing is known about swimming abilities of the other Macaques of India -

the pigtailed and stumptailed macaques of Assam and liontailed monkey of the Southern hills. But probably they can swim well. I was given an account of how a liontailed macaque swam across the deep pool beneath a waterfall in Courtallam (in which pool I was nearly drowned), by man who claimed to have watched the feat.

But do Langurs swim? I doubt they do. Of the four Langurs in our country, three (the Nilgiri black Langur, the Golden Langur and the Capped Langur) are highly localised forest monkeys of whose life we know little. The Golden Langur (*presbytis geei*) occurs in the Bhutan side of Manas, but from enquiry I learnt it was not* to be found on the Indian side. That proves nothing. The Manas is a wide fast-flowing river that most animals might not care to cross.

But I doubt if Langurs swim. I have mentioned three highly restricted kinds of Langur, and the fourth, the Common Langur, is not only common but is also the only monkey with an All India distribution from Kanyakumari to the Himalayas, from Maharashtra to Assam. I have often watched it near water in many different forests in the country (for it is essentially a forest monkey) and though it drinks regularly, the caution of its approach to water and the way it hugs the land while drinking, preferring to drink from puddle near a lake or pond direct, suggests a distrust of water.

I wonder if some reader who has been more fortunate than I can tell me if he has actually seen a Langur in deep water, and if at a pinch it can swim some distance, say, when it has accidentally fallen into deep water. Many animals which seldom enters water can swim a few yards, inexpertly, if they must. Even I can."

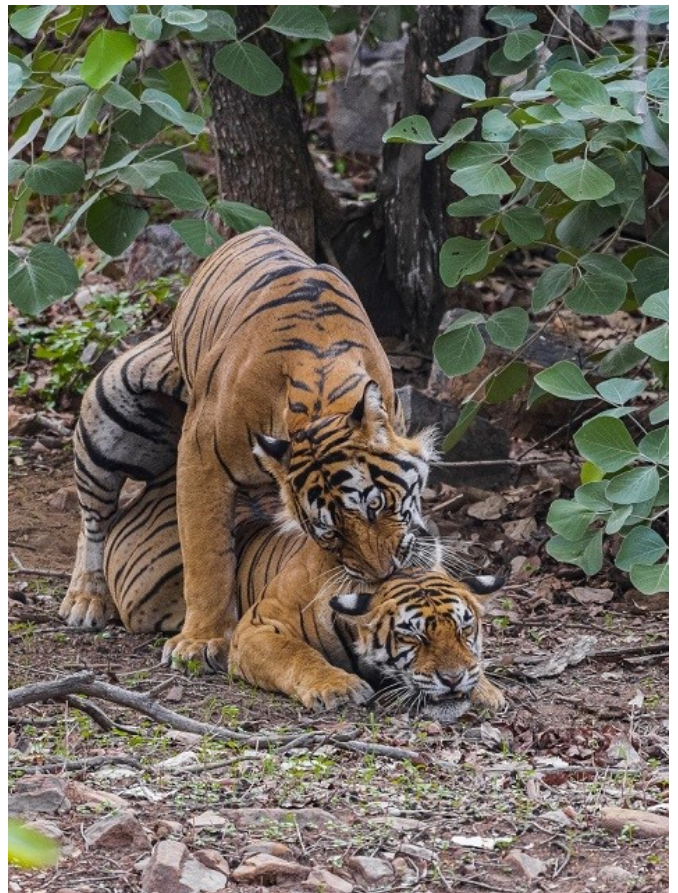
- M. Krishnan

This was published on 23 August 1970.

Wildlife Photography -
Rhino in Manas by Samrat Sarkar



Tiger mating by Sandipan Ghosh



Wildlife Photography -
Chousingha by Shyamala Kumar



Egyptian Vulture by Sabyasachi Patra



Wildlife Photography -

Redbilled blue magpie by Murugan Anatharaman



Saw-scaled Viper by Abhishek Jamalabad



Wildlife Photography -

Beetle mating shot by Prajwal Ullal



Tiger in water by Sabyasachi Patra





This is the 128th issue of IndiaWilds. The cover page photo of a frog peeping from behind a tree gives an impression as if it is playing hide and seek with us. Nature with its web of multiple inter-relationships between various species is complex and yet to be deciphered by our scientists. On the other hand Nature is also simple and beautiful. Nature can arouse joy, happiness and has the ability to relax us at any moment. If people can start getting exposed to such scenes where small moments of joy can create lasting impres-

sions, more and more people will start raising their voice to save our wilderness areas. In this increasingly urban world where majority of people stay in high rises and the only thing visible to them is high walls. No wonder scientists find that the level of stress is way higher in urban environment. It is time that people as well as Government understand this simple fact and not only ask kids as well as adults to spend more time in nature but also relook at the lopsided development where jobs are only created in big metros. We need to decongest our big cities so that people can stay in more rural world close to nature. With the internet becoming all pervasive, it would be easier to decongest our urban world. We need to start small steps towards the bigger goal.

The lead article in this issue talks about the problems of invasive species, especially the invasive fish species that get released to our waterbodies from fish ponds and aquariums. There is a need to control the illegal import of invasive fish species from abroad. Invasive species have a massive impact on the biodiversity and economy. Hopefully the Government can create a National Mission on controlling Invasive Species. That will be a big move for protecting the incredible bio-diversity that India has.

I look forward to your inputs and support in preserving the last tracts of wilderness and wildlife of 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 your user id and/or password you can mail administrator@indiawilds.com

Regards,

Sabyasachi Patra

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