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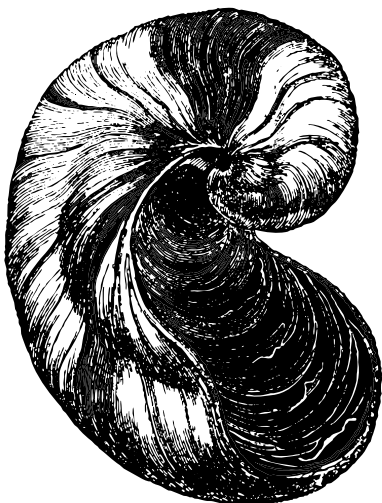
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Freshwater biodiversity assessments in Western Ghats

The IUCN commissioned an assessment of freshwater molluscs recently, based on which the species have been categorised for conservation status —Threatened/ Endangered/ Least Concern etc., and for distribution. This study was nested within a larger review of status of freshwater fishes, dragonflies, damselflies and aquatic plants in the Western Ghats.

The report records seventy seven species of freshwater molluscs in the Western Ghats. Seven species have been categorised as Threatened as per IUCN Red List Categories and Criteria (IUCN 2001), 51 species as Least Concern, and 19 species as Data Deficient. Endemicity was observed to be relatively low: 36% of freshwater molluscs, as compared to 76% for terrestrial molluscs. An assessment of threats shows habitat modifications are lethal to species that have adapted to live in specialised niches. Pollution, unsustainable harvesting, invasive species of aquatic flora and fauna, mining, urbanisation are some of the threats recorded in the assessment.

Aravind NA, who was one of the authors of the report, has been studying terrestrial and freshwater molluscs of the Western Ghats for ten years. His concern is that there is a deficiency of studies on mollusc ecology, threats and ecosystem services they provide; though references to historical data on the distribution and taxonomy of mollusc species are available. According to him ecological analysis is important: the Western Ghats is a complex of freshwater ecosystems and habitats like lakes, temporary pools, brackish water, streams, crevices of rocks besides streams, river beds; and what affects one species can be a commentary on the health/ vulnerability of the ecosystem—and its capacity to provide parallel services for human use and wellbeing. As per the IUCN report, pointing to the tangible and economic benefits of keeping an ecosystem and its component biodiversity alive is an explicit reason for this assessment. In this framework, molluscs form an important component of monitoring programmes that rate water quality and status of aquatic systems; especially bivalves, since they accumulate toxic substances to a greater extent than other organisms.





To understand the possible import of environmental changes on mollusc biodiversity and vice versa, ATREE has recommended research on ecology and ecological significance of molluscs, distribution and studies on population trends. Keeping in view that these are uncharismatic species that we are talking about, ATREE has recommended educating local communities regarding the significance of molluscs in their backyard, species-specific conservation programmes, and inclusion of molluscs in the Wildlife Protection Act of 1972 and other policies for their conservation. For the full IUCN report, go to <http://data.iucn.org/dbtw-wpd/edocs/RL-540-001.pdf>

Indian biodiversity on a portal

The ATREE-managed India Biodiversity Portal that employs GIS techniques to present biodiversity information of the subcontinent now has a new improved map platform (<http://indiabiodiversity.org/map#>) that is easier to browse and search. This citizen science initiative works better with contributions from users and inputs into documentation, research, education, sustainable use and conservation of biodiversity.

We have introduced two new sections of data, under Checklists and Species Pages. The checklist section (<http://indiabiodiversity.org/browsechecklists>) currently has a compilation of more than 250 species checklists from a wide range of taxa and across different geographies.

The latest section on species pages (see box and <http://indiabiodiversity.org/speciespage/species/list>) is designed in accordance with global standards of species information. In addition to taxonomy, description, ecology and conservation information, the species pages also has a field called Occurrence Records which integrates species location information from the map and checklist information.

Also, the general interest section introduces the News section, with a compilation of biodiversity news from all leading regional and national dailies, updated every day. The Events section compiles information on the latest conferences and workshops that may be of interest to researchers and students of ecology, environment and conservation. We also have an all-new Opportunities section that compiles a list of the latest jobs, internships and scholarships in biodiversity and related fields.

IBP now works in collaboration with the Western Ghats Biodiversity Open Collaborative Information System (<http://thewesternghats.in/>). Both portals share the same platform, enabling smooth and rapid exchange of data. IBP is actively exploring partnerships with other portals and groups to share biodiversity information. Look out for the workshop on Biodiversity Informatics being organised by the Western Ghats Portal in November.

Chitra Ravi

Dung beetle taxonomy made easier on IBP

ATREE's Insect Lab has prepared species pages for about 90 species of dung beetles (Coleoptera: Scarabaeidae:Scarabaeinae), available on <http://indiabiodiversity.org/speciespage/species/list>.

Heliocopris dominus BATES, 1868

General Description:
Size: 50-70mm in length and 35-50mm in breadth. It is abundant in the largest dung beetle in India.

Identification Characters:

- Genitalia black, sometimes white with a yellow tinge
- Head and pronotum transversely rugose. Part of the lower surface and legs clothed with red-buff hair.
- Clasper fully developed in males, short margin truncate, sides convergent, vertex rugose, with narrow parallel sides; in male, clasper carina a little elevated and curving slightly backwards.
- Pronotum very granular or granular, with small smooth areas in the male.
- Elytra shining, smooth striate, with the impunctate lines and sparsely punctured.
- Pygidium shining, flat and sparsely punctured.
- Metasternum in female hairy, smooth along the middle of the central shaft.
- Head (black) are armed with three strong horn teeth.

In well developed males the head bears four horns. The anterior part of the pronotum is produced in the middle into a sharp horizontal horn. In partly developed males the lateral horns of the head and the thoracic horn is also absent. The female possesses partly developed male, but the apical carina is acuminate forming a triangular horn.

Occurrence:
GA, B-D (2009) Giant Dung Beetles of the Genus Heliocopris (Coleoptera: The Catalogue of Life) 6(24): 519-521.
Joseph, K.J. (2005) The life cycle, ecological role and biology of immature stages of Heliocopris dominus Bates (Coleoptera: Scarabaeidae). Entomol. Indica 28(3): 247-256.
Joseph, K.J. (1994) Biology and breeding behaviour of the elephant dung beetle, Heliocopris dominus Bates (Coleoptera: Scarabaeidae). Entomol. Indica 21(4): 321-328.
Joseph, K.J. (1994) Sexual dimorphism and interspecific variation in the elephant dung beetle Heliocopris dominus (Coleoptera: Scarabaeidae). Entomol. Indica 21(4): 329-338.
Joseph, K.J. (1991) SEM study of the evolutionary organs in the giant dung beetle Heliocopris dominus (Coleoptera: Scarabaeidae) with observations on the significance of the second pronotum. Entomol. Indica 18(2): 123-132.
Anderson, J.H. & Day, W.J. (1974) Description of Elephant Dung in an arid, tropical environment. Georgia 19, 111-125.

These pages provide compiled information on a taxon, including valid name string of the species, description, distribution, images, synonyms, type locality, type depository, literature and related links. The information will include images of important distinguishing characters that will make identification of each species much easier. The Lab is in the process of developing species pages for all dung beetles of the Indian subcontinent.

Seena Narayanan Karimbumkara

Policy

Accepting community role in forest management

On 2nd October 2011 the district administration of Chamrajanagara distributed Community Forest Rights under the Forest Rights Act (FRA) to Soligas adivasis of 25 gram sabhas of Biligiri Rangaswamy Temple Wildlife Sanctuary and adjoining areas. This came after four years of sustained effort by Soligas to gain rights to forest produce, conservation, management and to cultural sites. The implementation of FRA in the district had so far only been restricted to granting of individual rights to cultivable land, under which 1500 households had been awarded land rights. However, forest community rights, which include the right to access and market forest produce like nellikai, honey, lichen, and collect firewood; rights to fish in water bodies in the protected area; rights to graze; have been denied to forest dwelling communities living in protected areas. Soligas, who have been dwellers and custodians of the BRT forested areas for centuries, who have cultural sites of worship that include trees, streams and stone formations within the sanctuary, can now legally collect firewood and non timber forest produce.

However, the most significant right under the community forest rights has less to do with the sustenance and livelihoods, and more to do with a bottom up model of governance. Section 3(1)(i) of the Act, enables the gram sabha to constitute committees for the management and conservation of the area of their CFR. In the long history of rights denied, this is likely to have the most impact because not only does it bring the community



together in collective decision making, it also gives Soligas a say in how the forests are managed and used by different stakeholders. This provision will require that the Forest Department, which has been used to taking decisions in a unilateral manner, and communities, which have by and large played a passive role of being on the receiving end of these decisions, change the way they engage with each other.

The Soliga vanguard on inclusive forest management

While the Soligas have protested against the declaration of BRT as a Tiger Reserve (BRT was declared a tiger reserve in 2010) and the implied access restrictions, they have also proposed an alternative community-based management regime that would address their needs as well as of tiger conservation. They further refined their ideas in a two-day workshop on community-based conservation, held on the 12th and 13th of July 2011 in BRT Wildlife Sanctuary. The workshop, organized by ATREE, Vivekananda Girijana Kalayana Kendra (VGKK), Kalpavriksh and Zilla Budakattu

Girijana Abivrudhi Sangha (ZBGAS), aimed to come up with a collaborative conservation plan for BRT that would include local and scientific knowledge. It was attended by over 200 people, including Soligas, conservationists, ecologists, social scientists, and policy analysts. The Forest Department, although invited, was not represented at this event. The participants put together a work plan on how the community might contribute to the critical aspects of governance and management, ecological conservation, and livelihood security using the provisions of the FRA and the Wildlife Protection Act.

The Soligas have proposed a three-tier hierarchy starting from a podu/settlement level committee, to taluka and sanctuary level. This would, according to them, ensure representation from the village level to Forest Department. As a first step, they constituted a 22 member working committee to oversee the community-based management plan. An advisory committee consisting of NGO and civil society groups such as ATREE, VGKK, Kalpavriksh, Nature Conservation Foundation, Vasundhara,

and independent conservationists and social scientists such as Ravi Chellam and Urmila Pingle. The plan will be shared with gram sabhas for comments and approval, and also with the Karnataka Forest Department for their essential inputs. Such a collaborative plan could be a model for other protected areas in the country.

The recent award of community forest rights in BRT, combined with the groundswell of support for a collaborative and inclusive management plan heralds a new phase in protected area management in India.

Policy workshop on REDD+

ATREE and Noragric, UMB, The Norwegian University of Life Sciences, organised a policy dialogue on Reducing Emissions from Deforestation and Forest Degradation (REDD) Plus for an audience of policy makers, academics, media persons, NGO leaders and others at the India International Centre, Delhi on 14th July 2011.

REDD proposes to increase the value of standing forests by creating a financial value for the carbon stored in trees. REDD+ seeks to include conservation and sustainable forest management efforts in this evaluation on the principle that a unit of carbon saved by checking deforestation is equal to a unit of carbon added due to conservation and afforestation measures. This dialogue was deemed relevant given that there have been growing reservations by different stakeholders regarding the efficacy

of REDD in reducing overall global emissions, on its funding mechanisms, on its impact on biodiversity as well as on forest dependent communities. At the same time, the governments of both collaborating organisations – Noragric and ATREE – are highly committed to the idea of REDD: Norway, through being its biggest donor, and India through its affirmation to REDD+. The objective of the dialogue was to share insights from current global and national research, and discuss the challenges and potential for implementing REDD plus in India.

The Chief Guest H.E. Ms. Ann Ollestad, Ambassador of Norway to India, made the inaugural remarks. Shri B M S Rathore, Joint Secretary, MoEF, introduced the Green India Mission, and its REDD+ component.

The dialogue was chaired by Prof. Kanchan Chopra, (former Director, Institute of Economic Growth). Chetan Agarwal, Winrock International, India, Dr. Sharachandra Lele, ATREE, and Dr. Arild Vatn of Noragric were the main speakers. Their presentations were followed by a discussion led by Nitin Sethi from Times of India, and Vikram Dayal from Institute of Economic Growth.

Outreach

Vembanad: Workshop on democratic governance

The Government of Kerala is proposing a Vembanad Kol Eco Development Authority (VEDA), the main purpose of which will be

conservation of Vembanad wetland ecology and sustainable use of the wetland resources using legal mechanisms, and through active coordination with all its stakeholders. Since VEDA's mandate clearly states consultation with stakeholders, and since the government is contemplating a structural and functional model consisting of only senior bureaucrats, ATREE organised a consultative workshop with the three tier panchayats and municipalities around Vembanad Lake, on democratic governance for Vembanad. This one-day workshop was held on 26 August at Alleppey.

Participants to the workshop analyzed rules and regulations, including Coastal Regulation Zone (CRZ) notification 2011, Wetlands (conservation and management) rules 2010, The Kerala Conservation of Paddy Land and Wetland Act, 2008, as would be applicable to Vembanad and VEDA. On the basis of this discussion, participants unanimously passed a resolution stating that the proposed VEDA should have adequate representation of the primary stakeholders and panchayat leaders of the area for planning, developing and managing this wetland. They also recommended that the state government should conduct enough consultations at the field level, to consolidate the views of all concerned, before finalizing the structure and functions of VEDA. The resolution has been forwarded to the Chief Minister of Kerala, with copies to the Secretary and Director of the Department of Environment and Climate Change, for necessary action.



CEPF-ATREE Western Ghats Grants: Last round

CEPF-ATREE RIT completed screening and external review of applications for the last round of CEPF-ATREE Western Ghats Grants (<http://www.atree.org/wgcall>). Seventeen Small Grant applicants and 10 Large Grant applicants were invited for direct presentations on 17th-18th August 2011. Of these, the Review Committee <http://www.atree.org/reviewers> approved funding for nine Small Grant applications, and invited eight Large Grant applications to submit full proposals.

These projects will add to the 30 Small Grants and 20 Large Grants currently being implemented in the landscape (http://maps.atree.org/cepf_sites.php).

New

Recognitions

Nagendra, Harini has joined the Scientific Steering Committee of the Global Land Project (<http://www.globallandproject.org/>) and the Scientific Committee of DIVERSITAS, for a three-year term, beginning January 2012. She finds this an opportunity to shape a focus on issues of interest, including urban monitoring, and greater consideration of the social-institutional linkages, especially in South Asia.

People

Ms. Anjali Pal, Receptionist, Bangalore

Mr. Jagdish M. R., Senior Research Fellow, Bengaluru

Dr. Pashupati Chaudhary, Visiting Fellow, Gangtok

Ms. Priti Gururaja, Senior Research Fellow, Bengaluru

Dr. Sarala Khaling, Regional Director, Eastern Himalayas office, Gangtok

Dr. Sumit Sen, Fellow, Gangtok

Publications

Gupta, A. and N. Kakati. 2011. Community engagement for conservation in Kaziranga National Park. *The Rhino. Journal of Kaziranga Wildlife Society* Vol 17.

K. S. Seshadri and T. Ganesh. 2011. Faunal mortality on roads due to religious tourism across time and space in protected areas: A case study from south India. *Forest Ecology and Management* 262: 1713–1721.

Krishnakumar, K., A. Ali, B. Pereira and R. Raghavan. 2011. Unregulated aquaculture and invasive alien species: a case study of the African Catfish *Clarias gariepinus* in Vembanad Lake (Ramsar Wetland), Kerala, India. *Journal of Threatened Taxa* 3(5): 1737-1744.

Lele, S. 2011. Re-reading the interdisciplinary mindscape: a response to Redford. *Oryx* 45(3): 331-332.

Lele, S., A. Kothari, Roma, A. Saikia, R. Rebbapragada, V. Kiro and J. Ete. 2011. Misreading the Issues and the

Landscape. *Economic and Political Weekly* 46(22): 107-108.

Pashupati Chaudhary, Suman Rai, Siddhant Wangdi, Akai Mao, Nishat Rehman, Santosh Chettri and Kamaljit S. Bawa. 2011. Consistency of local perceptions of climate change in the Kangchenjunga Himalaya landscape. *Current Science* 101(4): 504-513.

Ravikanth G., Srirama R., Ganeshiah K.N. and Uma Shaanker R. 2011. In pursuit of a universal barcode of plants: peril of followers? *Current Science* 101(3):269-271.

Shivanna, K. R. 2011. Pollen pistil interaction: A complex mating game required for fertilization in flowering plants. *Journal of Palynology* 46: 97-120.

Papers in edited books

Lele, S., I. Patil, S. Badiger, A. Menon and R. Kumar. 2011. Forests, hydrological services, and agricultural income: A case study from Mysore district of the Western Ghats of India. In: *Environmental valuation in South Asia* (eds. A. K. E. Haque, M. N. Murty and P. Shyamsundar). Pp.141-169. Cambridge, U.K. Cambridge University Press.

Popular Press

Hiremath, A. 2011. Alien species - Can they be stopped? In: *The Hindu Survey of the Environment 2011*

Lele, S. 2011. Rethinking forest governance: Towards a perspective beyond JFM, the Godavarman case and FRA. In: *The Hindu Survey of the Environment 2011*

Rai, N. 2011. Looking beyond Protected Areas to save species. In: *The Hindu Survey of the Environment 2011*

Conference papers

Harisha, R.P, Ramesh Kannan, Aravind. N.A, Ravikanth.G. (2011). Uses of wild edible plant resources by forest dependent communities in southern India. National Conference on Science of Climate Change and Earth's Sustainability: Issues and Challenges, September 12, 2011, Lucknow, India.

Lele, S., A. Kurien. 2011. Interdisciplinary analysis of the environment: Insights from tropical forest research. 6th International Conference on Environmental Futures (6th ICEF). Organised by Foundation for Environmental Conservation and Newcastle University Newcastle, UK. 18-22 July 2011.

Talks/ presentations by staff

Gupta, A. Conservation, development and human needs: Community priorities in fringe villages around Kaziranga National Park, Assam. 'Poster Presentation' at Students Conference on Conservation Science held in Bengaluru, 14-17 September 2011.

Harisha, R. P. 2011. Uses of wild edible plant resources by forest dependent communities in southern India at National Conference on Science of Climate Change and Earth's Sustainability: Issues and Challenges, organised by The Society of Earth Scientists, India. 12-14 September 2011, Lucknow.

Lele, S. 2011. Forest hydrological services and socio-economic impacts: Insights from the Western Ghats. Invited lecture at Centre for Technology Alternatives for Rural Areas (CTARA), Indian Institute of Technology, Mumbai. 19 July 2011.

Lele, S. 2011. India's carbon sink policy. At Southern Regional Workshop on Climate Change

organized by Tata Institute of Social Sciences, Delhi Science Forum and All India People's Science Network. Hosur, Tamil Nadu. 7 July 2011.

Lele, S. 2011. India's policy towards REDD+: Dense Forest Ahead! Policy Dialogue on Reducing Emissions from Deforestation and Degradation (REDD). Organised by ATREE and Noragric. New Delhi. 14 July 2011.

Lele, S. 2011. Interdisciplinarity in environmental research: Or how the social is intertwined with the technical. Indian Institute of Technology, Mumbai. 19 July 2011.

Lele, S. 2011. Re-thinking forest governance in India: Relating theory to practice. ATREE, Bengaluru. 13 July 2011.

Lele, S. 2011. TEEB India: Concerns, gaps, and way forward. At National Workshop on The Economics of Ecosystems and Biodiversity (TEEB)-India Study. Organised by Ministry of Environment and Forests and Indian Institute of Forest Management. Bhopal. 15-16 September 2011.

Ravikanth, G. Prospecting for natural products using ENM. At a three-day workshop on Products from natural resources: Prospecting and utilization. Vellore Institute of Technology, Vellore. 27 to 29th July 2011

Siddappa Setty R., gave eight talks on Environment and sustainable use of natural resources for Gram Panchayat representatives from Gadag, Gulburga, Yadgir, Chitradurga, Dharwad and Davangere district at Mahatma Gandhi Institute of Rural Energy and Development, Bengaluru, from July to September 2011.

Workshops

Lele, S. 2011. Panelist in panel discussion on Beyond Science: Conservation and Activism. 2nd

Student's Conference on Conservation Science (SCCS). SCCS-Bangalore. 16 Sept 2011.

Kannan, R, C. Shakleton, Uma Shaanker, R, and Ganeshiah, K. N. (2011).Reconstructing the history of lantana introduction and spread in India. 11th International Conference on Ecology and Management of Alien Plant Invasives, August 30, 2011, Szombathely, Hungary.

Events

Agasthyamalai CCC: Be a better ancestor campaign during Aadi amavasa festival at Sorimuthayan Temple, which is located in Kalakad Mundanthurai Tiger Reserve.

Vembanad CERC: Sixty students of the Jalapaadom Wetland Club, their teachers and concerned citizens revisited the Punnamada Lake after the Nehru Trophy Boat race and removed boatloads of plastic waste thrown by visitors. This anti-plastic campaign was organised on Independence Day.

Charkha Awards for journalists (*reported late*): ATREE is supporting the Charkha Awards for journalistic writing in Kannada, on scientific and social developments on the environment. The awards are instituted by CDL – Centre for Development Learning. Swetha Pangannaya from Vijay Karnataka received the 2010 award on environmental writing for her article on e waste dumping.

Partnership with Wipro: ATREE has entered into partnership with Wipro Earthian Awards for schools and colleges. The Earthian programme invites papers on thoughts, approaches and possible solutions on nine key challenges/themes in the area of environment and related social issues. A special award, TN Khoshoo-Earthian Trophy will be given on the

criteria of do-ability and potential impact of the idea submitted.

Press

GIS mapping gaining popularity. Economic Times. 13 October 2011.

Some freshwater molluscs in Western Ghats under threat. The Hindu. 10 October 2011.

Union govt coaxing State on heritage tag. Deccan Herald. 16 September 2011.

Changing climate a hot topic among Himalayan villagers, study finds. National Geographic. 12 Sept 2011.

Is JFM relevant? Down to Earth. 15 Sept 2011.

Environmental disaster in the making: Ecologists blast Posco. Hindustan Times. 23 August 2011.

Students trained to assess impact on biodiversity. The Hindu. 28 July 2011.

Call for an eco-friendly festival inside forest. The Hindu. 18 July.

Sankey tree-felling misguided. Deccan Herald. 14 July.

Restrict use of fossil fuel. The Hindu. 8 July.

Co-existing with the Tiger | iGoa. The Navhind Times. 9 July.

Western Ghats fails to get heritage tag. Times of India. 1 July 2011

Check the latest issue of Nesara – bilingual newsletter of DBT's Natural Resource Awareness Club at http://atree.org/newsletters/Nesara/nesara-apr-jun-v2_2-2011.pdf

Agasthya at http://atree.org/newsletters/agasthya/Agasthya_5-2.pdf



Offices

Bangalore

Royal Enclave, Srirampura
Jakkur Post, Bangalore 560 064
Tel: +91-80-23635555,
Fax: +91-80-23530070

Eastern Himalayas

Khangsar House,
Above Brahmakumari, Development Area
Gangtok 737101
Tel: +91-3592-206 403

New Delhi

2nd Floor, 1, K Commercial Complex
Birbal Road, Jangpura Extension
New Delhi 110014
Tel: +91-11-2432 3133

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Ecosystems and Global Change
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Land Water and Livelihoods

Academy

Dr. Aravind N. A.,
*Coordinator, Academy for Conservation
Science and Sustainability Studies*

This newsletter has been put together
from reports by ATREE folk. Design
and layout is by Salil Sakhalkar.
Editing by Samuel Thomas and Meetu Desai.