Biodiversity News of Andhra Pradesh

A Newsletter of Andhra Pradesh State Biodiversity Board

You too can contribute to this Newsletter

If you have any views, findings or opinion on Biodiversity of Andhra Pradesh and its Conservation, to share, or any article for the 'Features' and Environment Education sections, please send in your contribution in MS Word format to Article Editor (braconsindia@ gmail.com). Articles will be modified to suit the format of the Newsletter.

You can get in touch with the Article Editor with your name, address, email and telephone details for inclusion in our mailing

ANDHRA PRADESH STATE BIODIVERSITY BOARD

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Your life depends on Biodiversity....



Views

The Biodiversity News of Andhra Pradesh

The Andhra Pradesh State Biodiversity Board is proud to announce the launch of a Quarterly Newsletter to disseminate information and opinion on the status of biodiversity in Andhra Pradesh. This newsletter aims to reach amateurs and professionals alike with issues and information that needs our time, concern and action. The articles in this newsletter range from scientific to general in nature to cater to wider audience. 'Special Feature' and features on 'Flora' and 'Fauna' will have invited or contributed articles on relevant theme of the 'Issue'. In each 'Issue', one endangered taxa each from flora and fauna will be covered. Feature on 'Environment Education' will have contributed item on this theme. 'Nature for Kids' is meant for young and those young-at-heart.

The future 'Issues' would cover readers' response too. Reader's can send their feedback to Article Editor.

Editorial Board

Signing Off

Bird Paradise: Kondakarla Ava and its conservation

Around 50 kms away from Visakhapatnam city lies the picturesque wetland of Kondakarla Ava, in Atchutapuram and Munagapaka Mandal of Visakhapatnam District. Kondakarla Ava (17°35'30" & 17°36'02"N; $82^{\circ}59'27" \& 83^{\circ}01'02"E)$ is the second largest natural fresh water lake in Andhra Pradesh. Spread on an area of 1863 acres, Kondakarla Ava wetland is a part of the Sarda riverine system and it is classified as a perennial, warm, polymitic, euphotic and eutropic fresh



Nymphea nouchali : Kondakarla Ava

water lentic body. The water depth ranges from 1m in summer to 3 m in rainy season. It has been included as a conservation site by the Asian Wetland Bureau and World Wild Life Fund (WWF) in 1992.

This wetland supports a rich diversity of aquatic life forms, like 44 genera of phytoplankton, including 22 belonging to Chlorophyceae, 7 to Bascillariophyceae and 12 to Myxophyceae; 66 species of zooplankton, including 2 genera belonging to Protozoa, 26 to Rotifera, 15 to Cladocera, 3 to Ostracoda, 11 to Copepoda and 9 to Insect larvae.

Wetland being a shallow and euphotic water body supports a luxurious growth of aquatic macrophytes including 15 varieties of macrophytes. As many as 20 species of fishes including 8



Kondakarla Ava, Vishakapatnam

native species. It is also a major stop-over for the migrating birds and as many as 97 species of birds including pochards, teals, shoveller, stilts, herons and egrets, storks, and cormorants have been recorded.

Kondakarla Ava is a multifunctional rural lake with tremendous biodiversity and ecotourism potentials.

Jayati Chourey^{1,2}, K. Kameswara Rao¹ and Suprava Patnaik²

1 - Department of Env. Sci., Andhra University, Vishaka-

2 - Indian Institute of Forest Management, Bhopal

APRIL TO JUNE 2007

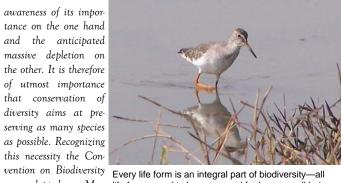
Editorial

Biodiversity is the totality of variability of genes and species of plants, animals and microorganisms that are required to maintain the function of the ecosystem. This comprises the diversity and variability of genetic resources used for crop plants, medicinal and aromatic plants, fodder, fibre, fuel plants, spices, etc. and also includes non-harvested species that enhance biological value and support maintenance of the integrity of ecosystem having a web of soil biota, pollinators, herbivores and predators. Since the advent of agriculture by 10,000 BC no ecosystem in the world remains untouched by human interventions. The driving force of human habitation needs resulted in clearing and partial deforestation of selected habitats for stable agricultural practices. Biodiversity is the very basis of human survival and economic well-being and encompasses all life forms, ecosystems and biological processes. It has attracted world attention because of growing

awareness of its impor tance on the one hand and the anticipated massive depletion on the other. It is therefore of utmost importance that conservation of diversity aims at preserving as many species as possible. Recognizing this necessity the Con-22, 1992 of which

India became a Party in 1994. Reaffirming the sovereign rights of the Parties over their biodiversity the Convention balances conservation, sustainable utilization and access to and use of biological resources and associated knowledge with fair and equitable sharing of benefits arising out of such use.

Our country too has formulated many policies in this direction with an ultimate goal of conservation of biodiversity and equitable benefit sharing arising out of use of our



was adopted on May life forms need to be conserved for human well being

bioresources

Through this newsletter we hope to bring more awareness on these aspect. We in India have strong and deep-rooted commitment and respect for Biodiversity. I conclude with a note that "If we protect nature, the nature protects us" Prakruthi Rakshati Rakshithah.

> R. Hampaiah Chairman,

Andhra Pradesh State Biodiversity Board

Briefly

Andhra Pradesh State Biodiversity Board

The Andhra Pradesh State Biodiversity Board has been established under Section 22(1) of the Biological Diversity Act, 2002 vide the Andhra Pradesh Gazette No. 290 dated May 20, 2006.

The Andhra Pradesh State Biodiver sity Board consists of 10-members [Chairman; Member-Secretary; 4

Ex-Officio Members of State Government including Special Chief Secretary Environment and Forests. Special Chief Secretary Animal Husbandry & Dairy Development. Principal Secretary Agriculture, and Principal Chief Conservator of Forests (wildlife); and 4 Expert Membersl.

So far the State Biodiversity Board has met once and have initiated different activities under the provision of the Biodiversity Act, 2002 and Biodiversity Rules, 2004.

V. B. Ramanamurthy

Member-Secretary

Andhra Pradesh State Biodiversity Board

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Special Feature

The Biodiversity Act, 2002 of India

India, one of the 12 megadiverse countries of the world, is a Party to the Convention on Biological Diversity (1992) that recognizes the sovereign rights of States to use their own biological resources, recognizes contributions of local and indigenous communities to the conservation and sustainable utilization of biological resources through traditional knowledge, practices

country with the purpose of securing equitable share in benefits arising out of the use of biological resources and associated knowledge related to biological resources; ii. to conserve and sustainably use biological diversity; iii. to respect and protect knowledge of local communities related to biodiversity; iv. to secure sharing of benefits with local people as conservers of biological resources and holders of knowledge and information relating to the use of biological resources; v. conservation and development of areas of importance from the standpoint of biological diversity heritage sites; vi. protection and rehabilitation of threatened species; vii. involvement of institutions of state govern-

The salient features of this Act

are - i. to regulate access to

biological resources of the

ments in the broad scheme of the implementation of the biological Diversity Act

mittees.

To achieve this purpose, the Indian Government has after an extensive and intensive consultation process involving

diversity (like Central ernment, State Governments, institutions local governmental

For copy contact Article Editor industries, etc.) sity Act, 2002 sources.

or the office of the Andhra Pradesh State Biodiversity Board

Note:

Abridged from The Biological

Diversity Act, 2002 and

Biological Diversity Rules,

2004. National Biodiversity

Authority, Chennai. 57 pp.

and innovations and provide equitable sharing of benefits with such people arising from the utilization of their knowledge, practices and innovations.

MINISTRY OF LAW AND JUSTICE

New Delhi, the 5th February, 2003 / Magha 16, 1924 (Saks

THE BIOLOGICAL DIVERSITY ACT, 2002 No. 18 of 2003

The following Act of Parliament received the assert of the President on the

the stakeholders in biological

Gov- COU organizations, SAVE BIODIVERSITY tional Biodiver-

has brought The Biodiversity Act, 2002 - ensuring conservation, sustainable use Biological Diver and equitable sharing of bioreties like transfer

through Gazette notification no. 18 Of 2003 dated 5th February 2003.

The main thrust areas of Biodiversity Act, 2002 are i. Regulation of access to Biological Diversity; ii. Establishment of National Biodiversity Authority (already constituted with

through constitution of com-

headquarters at Chennai) with many functions vested in it; iii. Prior approval from the Na-

sity Authority for certain activiof biological resources or

knowledge, determination of equitable benefit sharing etc., and iv. Constitution of State

Biodiversity Boards.

The State Biodiversity Boards would be formed by State Governments by notification in the Official Gazette and would be known as (name of the State) Biodiversity Board headed by a chairperson, not more than five ex officio members appointed by the State Government to represent concerned Departments of the State Government, and not more than five members from among experts in matters relating to conservation of biological diversity, sustainable use of biological resources.

The State Biodiversity Board in turn would be required to constitute Biodiversity Management Committee and Local Biodiversity Fund within its area for the purpose of achieving goals of the Biological Diversity Act, 2002.

The Biodiversity Management Committee shall consist of a Chairperson and not more than six persons nominated by the local body, of whom not less than one third should be women and not less than 18% should belong to Schedule Castes/Scheduled Tribes. The main purpose of the Biodiversity Monitoring Committee is to prepare People's Biodiversity Register in consultation with local people. The Register shall contain comprehensive information on availability and knowledge of local biological resources and also advise on any matter referred to it by the State Biodiversity Board for granting approval, to maintain data on important information.

V. B. Ramanamurthy

Member-Secretary, Andhra Pradesh State Biodiversity Board Nature for Kids

Role of Dung Beetles in Nature

Dung beetles refer to those beetles which feed partly or exclusively on feces. Most of these species belong to the family Scarabaeidae. As most species of Scarabaeinae feed

exclusively on feces, that subfamily is often dubbed true dung beetles. There are dung-feeding beetles which belong to other families, such as the Geotrupidae (the earth-boring dung bee- Dung Beetle female rolling tle). The Scarabaeinae the dung ball to her nest for alone comprises more laying eggs than 5,050 species.



The size of a dung beetle

varies from species to species. The "dwellers" are usually small and elongate. Dung beetles are basically black or brown in colour;

> some are of metallic lustre, especially the tropical species. Most dung beetles have a flattened, but stout body. Some beetles, dung other than the "dwellers", have strong, often

"toothed" legs specialized for

rolling dung and burrowing. Dung beetles have soft mouthparts suited to their

Dung beetles play a remarkable role in agriculture. By burying and consuming dung, they improve nutrient cycling and soil structure. They also protect livestock, such as cattle, by removing the dung which, if left, could provide habitat for pests such as flies. Therefore, many countries have introduced the creature for the benefit of animal husbandry.

[Adapted from Wikkipedia]

News

2007 is Year of Climate Change

Combination of global warming and the El Niño weather system is set to make 2007 the warmest year on record with far-reaching consequences for the planet.

The forecast for 2007 is of extreme global weather patterns which could bring drought to Indonesia and leave California under a del-

2007 will be a crucial year for determining the response to global warming and its effect on humanity. The long-term trend of global warming - already blamed for bringing drought to the Horn of Africa and melting the Arctic ice shelf - is set to be exacerbated by the arrival of El Niño, the phenomenon caused by aboveaverage sea temperatures in the Pacific. Combined, they are set to bring extreme conditions across the globe and make 2007 warmer than 1998, the hottest year on record.

Events

Samalochana

The Andhra Pradesh State Biodiversity Board convened a meeting 'Samalochana' with Government Departments and NGO's active in biodiversity field on 4th April, 2007 to chalk out future actions that needs to be taken up by the Board. After a brief introduction on Biodiversity Act, 2002 and the State Biodiversity Board by Member-Secretary, the Chairman of the Board invited the participants to put forth their views and ideas.

Major points that materialized during the meeting include:

i. updating of the State of Environment Report; ii. launch of web portal and newsletter for information dissemination; iii. initiation of work on Peoples' Biodiversity Registers; iv. preparation of habitatspecific, taxon-specific, and areaspecific Conservation Action Plans; v. preparation of Biodiversity Conservation Manual; vi. establishment of Biodiversity Parks; vii. initiation of work on District-level Biodiversity Database; viii. grass root-level capacity building workshops; ix. translation of Biodiversity Act, 2002 and Biodiversity Rules, 2004 documents in Telugu; x. conducting awareness camps and workshops; xi. felicitation of bare-foot conservationists; and xii. inclusion of Cycas beddomei and other endangered plants in Section 38 of the Biodiversity Act, 2002.



The positions put forward by China, India and Brazil were part of a long-term negotiating strategy by the world's three most powerful developing nations. They want to set the stage for other major international political events this year, such as the G8 leaders' summit in June in Germany and a United Nations climate change conference in Bali in December.

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Andhra Pradesh Forest Department in collaboration with WWF has initiated CAFÉ (Children and Forest Education) Programme in 2004-2005 aims at sensitizing children from Urban Schools about nature and its conservation.

Environment Education

Status of Environment Education in Andhra Pradesh

Environment Education activities in Andhra Pradesh was spearheaded by Andhra Pradesh Forest Department through their numerous Environment Education Centres that were established in the Protected Area Networks of the State since past few dec-

Many Non-Governmental Organizations and University Departments too contributed for the cause in collaboration with the Andhra Pradesh Forest Department. In the recent years, the Andhra Pradesh Forest Department has initi-

ated a programme on 'Conservation Education through its Wildlife Education Extension Wing. Some n Governmental



Inspiring young minds - Environment Education for School

Pic. C. Srinivasulu slide

organizations like WWF, National Green Corps, Centre

for Environment Education, Zoo Outreach Organisation, C.P.R. Foundation's Environment Education Centre and University Departments in Outdoor environment edu-Zoology have been cation actively involved at Graduates conducted in ganizations and the various levels of activities imparting

conservation education to the society in general and school and college students in par-

> Most of the Environment Education programmes involve establishment of nature clubs among

arget groups and different kinds of conservation education activities like shows, talks

and lectures, conducting theme based workshops, na-

ture trails, plantation programmes, elocution, debate, essay writing and painting competitions, and wildlife film shows. Many of these Non-Programme for Governmental Or-

Pic. C. Srinivasulu forest department's environment educa-

tion extension wing are now targeting at sensitizing biology teachers and lecturers through conducting special training programmes and developing teacher's training manuals focusing on educating sustainability concepts.

Anuradha Vinodh Wildlife Education Extension Wing, Andhra Tulja Bhavan, M. J. Market, Hyderabad

> Bhargavi Srinivasulu Wildlife Biology Section, Department of Zoology, University College of Science, Osmania University, Hyderabad

Pioneers in Conservation Shri T. Hanumanthu

This middle-aged bespectacled man looks unassuming at first glance. One small interaction with him would lets one know that how different is Shri. T. Hanumanthu is from others.

Native of M. Agraharam, Kurnool district this gentleman in his early fifties has devoted his life to wildlife and nature conservation. His liking towards wildlife and the existing apathy towards wild animals and destroying nature has hurt him so badly as a young child that he decided to say good bye to village school while studying fourth class to back for this man.

An encyclopedia of local traditional knowledge, values and bioresources, Shri T. Hanumanthu - the bare-footed conservationist, has been visiting scores of village schools and colleges in Kurnool and neighbouring districts to spread awareness about nature and its conservation.

Shri. T. Hanumanthu was very instrumental in convincing local villagers surrounding Rollapadu Wildlife Sanctuary the importance of protecting blackbucks that were regularly causing damage to their crops. Villagers understood and respected Shri T. Hanumanthu's view on conservation.

Owing to this dedication and service, the Andhra Pradesh State Forest Department has appointed him as Honorary Wildlife Warden. Certainly, Shri T. Hanumanthu and many others like him who are diligently working their best for the cause of conservation are the real unsung heroes.

Volume 1, Issue 1

Feature - Floral Diversity

Endemism and Agro-biodiversity in Eastern Chats

Eastern Ghats is enormously rich in its plant wealth including its vast heritage of agro biodiversity. It is one of the major phytogeographical regions

The contribution of the

tribal groups in the do

mestication and enrich-

ment of the genetic vari-

ability is immense. Their

traditional knowledge and

expertise too needs to be

conserved.

Important Endangered

Endemic Plant Taxa of Eastern

Andrographis beddomei, Atylosia

cajanifolia, Boswellia

ovalifoliolata, Celastrus

paniculatus, Crotolaria longipes,

Cycas beddomei, Decalepis

hamiltonii, Decaschistia rufa,

Heterostemma deccanese, Nervilia

aragoana, Paederia foetida,

Phlebophyllum jeyporense,

Phyllanthus narayanaswamii,

Pimpinella tirupatiensis, Piper

nigrum, Plectranthus barbatus,

Pterocarpus santalinus, Pueraria

tuberose, Raphidophora decursiva,

Santapaua madurensis, Saraca

asoca, Shorea tumbaggaia,

Syzygium alternifolium, Terminalia

pallida, Toxocarpus roxburghii,

Trichosanthes anaimalaiensis,

Urginea nagarjunae, Vanilla

wightiana, Vernonia shevaroyensis,

Wendlandia angustifolia,

Zanthoxylum rhetsa, Zingiber

<u>Ghats</u>

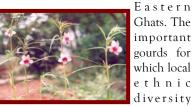


Boswellia ovalifoliata - An endemic medicinal plant of

Pic. N. Siva

of our country with about 2000 species of vascular Ghats plants of which 21% are endemic and with 160 species of cultivated plants. As many as 452 endemic species belonging to 243 genera and 78 families are reported from the Eastern Ghats. This region is also enriched with agri-horticultural endemic diversity including valuable diversity in paddy, millets, pigeonpea, cowpea, hyacinth bean, rice bean, niger, brinjal, cucurbits, yams, banana, mango, custard apple, ginger, turmeric etc.





Sesamum alatum - Wild relaoccurs tive of cultivated Sesame from through

Pic. N. Sivaraj out

Eastern Ghats are bottle gourd, pumpkin, s n a k e gourd, ridged

Land races of rice from Eastern gourd and

Pic. N. Sivaraj & bitter S.R. Pandravada

of many them have already been documented.

Wild relatives of crop plants At least, 91 wild related species of crop plants are reported in the region. They occur as members of disturbed, bio-edaphic communities within the major vegetation types throughout the Eastern Ghats. Many wild species are distributed in this region, which are the sources of genes for different biotic/ abiotic stresses.

Endemics The endemic species of Eastern Ghats region are classified as palaeoendemics.

Major land races of cereals and millets in Eastern Ghats

Paddy Attedlu, Mora, Bhatagunda, Sankara, Gourani dhan, Tikichudi, Kalajira, Limbachudi, Mettadhanyam, Laldhan, Sindhikoli, Samba, Limchudi, Vattodlu, Moddu garikalu, Mullodlu, Kursobhog, Karivanji, Errodlu, Zeeradhan

Sorghum Erra jonna, Donda jola, Pachha jonna, Chencholam, Konda jonna, Kondamoddu jonna, Podu jonna, Thalaivirichan cholam, Kempu jola, Athakodalu jonna, Bilijola, Tella jonna, Pachcha jonna

Italian millet Errakorra, Nallakorra, Palakorra, Jadakorra, Pasupukorra, Senthi nai, Karumthinai, Palanthinai, Mossakkanthinai, Kilanthinai, Punasakorra

Finger millet Bada mandia, Buradha chodulu, Chhota mandia, Chinna chodlu Dasara chodi, Garuvu chodi, Gumpa chodi, Korra chodi, Tellaragulu, Metta chodi

gourd.



Diversity of Foxtail Millet from Pic. Babu Abraham



Diversity of Tuber Crops from the Eastern Ghats

Pic. B. Sarath Babu region and the uses

In medicinal plants diversity, more than 1800 taxa are reported to occur in



Diversity of Bottlegourd from Fastern Ghats Pic. S.R. Pandravada

The rich and diverse heritage of traditional indigenous floristic wealth including agro-biodiversity in Eastern Ghats needs to be conserved as the fragile ecosystem is highly threatened due to various factors.

Most species belong to moist

deciduous (173 sps.), dry de-

ciduous (121 sps.), semi-

evergreen (63 sps.), scrub (15

sps.) and others (80 sps.) vege-

tation types.

K.S. Varaprasad and N. Sivaraj

National Bureau of Plant Genetic Resources Regional Station, Rajendranagar, Hyderabad

take up the task of understanding nature and wildlife, and educate others about their importance and protection. Since then there is no looking

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new season on Ugadi Day. Pic. U. Subramanvan

Page 6

Shri T. Hanumanthu showing Mun-



Small Cats Known from Eastern Ghats of Andhra Pradesh: Jungle Cat [Felis chaus] Leopard Cat [Prionailurus bengalensis] Rusty-spotted Cat

[Prionailurus rubiginosus]

Fishing Cat

[Prionailurus viverrinus]

Small cats are elusive and are threatened due to habitat loss, illegal killings and expansion of agriculture

Feature - Faunal Diversity Small Cats of Eastern Ghats, Andhra Pradesh

Unlike their larger cousins, the small cats have been long ignored from scientific studies point-of-view. There exists many gaps in scientific knowledge about their biology, ecology, distribution, etc. The small cats are no less ecologically as important as their larger cousins.

Of the 10 species of small cats found in India, 4 species have been so far reported from Eastern Ghats of Andhra Pradesh. Some species have

wider range while others are restricted in distribution.

Jungle Cat Known Jungam or Jangu Pilli in vernacular, the

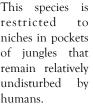
Jungle Cat is one of the most common and widely distributed small cat present in Andhra Pradesh. In the Eastern Ghats of Andhra Pradesh it has been reported from many sites and have been found to be at home both in jungles as well as degraded habitats that are affected by human activities, agriculture fields and near human habitations. Although considered to be doing well this species faces risk of local extermination due to illegal hunting by certain tribal groups that relish its flesh. Hybridization with do-

mestic cat is also leaching the genetic purity of this species. The combined effects of these factors and local apathy has led to local extermination of this



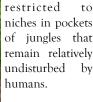
Leopard Cat The Leopard Cat is an elusive species that had been reported from dense mixed de-

ciduous forested tracts of the Eastern Ghats in Andhra Pradesh. It has been frequently reported from different sites in Seshachalam Hills, Nallamala Hills, Papikonda Hills and Golakonda Hills.



Leopard Cat

Prionailurus bengalensis



Rusty-spotted Cat - Another of the elusive and

rare small cat of Andhra Pradesh. In the Eastern Ghats of Andhra Pradesh it has been reported from the Amrabad Plateau

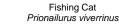
Nalthe Hills lamala basing on a road-killed specimen in the late 90s. This cat had been subsequently sighted near Srisailam in

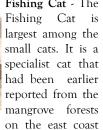
June 2003.

Rusty-spotted Cat

Prioailurus rubiginosus

Jungle Cat Felis chaus





Fishing Cat - The

have been poorly documented. Many factors are acting against small cats survival in the Eastern Ghats. Excepting a few pockets of jungles in the Protected Area Network in Eastern Ghats of Andhra Pradesh, the forests and habitat that these cats prefer is severely disturbed by humans and also by biotic pressures. The direct threat to small cats in Andhra Pradesh

Andhra

Pradesh. Its presence from Eastern

Ghats had been

reported basing on

the sighting of a

single specimen

feeding along the

banks of Gund-

lakama vagu in

Gundla Brameshwaram Metta

Wildlife Sanctuary in late

1990s. Very recently it has

been also reported from Gola-

konda Hills in Northeast An-

Owing to their elusive and

nocturnal nature, small cats

dhra Pradesh.

is the killing of small cats by tribal people for food, and indirect threat includes loss of suitable habitats due to deforestation, illicit felling for firewood, fodder and timber. encroachment and expansion of

agriculture.

C. Srinivasulu

Wildlife Biology Section, Department of Zoology, Osmania University, Hyderabad 500 007, Andhra Pradesh

Endangered Plants of Andhra Pradesh Cvcas beddomei

Cycas beddomei is the only cycad species that is listed on CITES Appendix I. The presence of this species was first observed by Col. Richard Henry Beddome in whose honour it has been named. It belongs to the genus Cycas, native to India, where it is confined to a small area of Andhra Pradesh state in the Kadapa Hills and Seshachalam Hills. It has been also reported recently from Srikakulam.

This cycad is found in dry, hot sites in the scrublands of eastern India. Clumps of the plant are common via pups only in males. The plant is fairly fire resistant, except as seeds and seedlings, which are very vulnerable to annual grass

fires. The male cones of the plant are used by local herbalists as a cure for rheumatoid arthritis and muscle pains. This cycad, due to its demand for medicinal purposes, and consequent reduction in living populations, is now critically endangered.

The species is unusual in that it contains a layer of

fleshy material between the sarcotesta and the sclerotesta that is thought to aid the seed by providing it with a source of Cycas beddomei - An water. As cycad seeds endangered endemic of have no dormancy, this would be an important trait in its arid habi-



frequent grassfires effectively block reproduction by burning seeds and seedlings. An even more effective block to reproduction is the use of the male cones in Ayur Veda medicines, making them a trafficable commodity which can earn

Although present in consider-

able numbers, this species

faces a number of significant

threats. It is well adapted to

rapid recovery after fire, but

peasant villagers a few desperately needed rupees. The villagers scour the hills for cones, removing all be-

fore pollen shed.

[Both Articles on this page has been adapted

Vernacular name: Peritha, per itha, konda itha,

C. beddomei was accorded a status of endangered by the 1997 IUCN Red List of Threatened Plants category

Madana-Kamakshi

Endangered Animals of Andhra Pradesh Jerdon's Courser Rhinoptilus bitorquatus

The Jerdon's Courser (Rhinoptilus bitorquatus) belongs to the pratincole and courser family Glareolidae. The bird was named after the zoologist Thomas C. Jerdon who discovered it in 1848. It was rediscovered in 1986 by Bharat Bhushan, an ornithologist at the Bombay Natural History Society after being

thought to be extinct. This courser is a restricted-range endemic found locally in India in the Eastern Ghats of Andhra Pradesh. It is cur-

Jerdon's Courser Rhinoptilus bitorquatus rently only known

in the Sri Lankamalleshwara Sanctuary, inhabiting a sparse scrub forest interspersed with patches of bare ground.

It is an unmistakable compact courser, with two brown breast-bands. It has a yellow bill with a black tip, a blackish crown, broad buff supercilium, and orange-chestnut throat patch. In flight it shows a mostly black tail and a prominent white wingbar. It is a crepuscular bird and is

> known to be vocal at dawn and dusk with in a series of staccato Twick-too...Twick-too... Twick-too calls.

This bird was known only from a few historical records and was

thought to be extinct until its rediscovery in 1986. It remains critically endangered due to loss of habitat. It is nocturnal in habit and presumed to be insectivorous. Being a rare bird, nothing is known yet about its behaviour and nesting habits.

Population estimates for the bird vary from 25 to 200. Recent studies have made use of techniques such as tracking strips where the footprints may be recorded.

This bird was known only from a few historical records and was thought to be extinct until its rediscovery in 1986. It remains critically endangered due to loss of habitat. It is nocturnal in habit and presumed to be insectivorous. Being a rare bird, nothing is known yet about its behaviour and nesting habits.

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