



ENVIS SIKKIM



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Dear Reader,



C. Lachungpa, IFS
Programme Coordinator

Publication of this second issue of ENVIS News Letter by our centre is yet another mile stone in our journey to provide ultimate environment related information of our beautiful state Sikkim. I take this opportunity to invite environment related articles from appropriate persons for the publication in the forth coming issues. I hope that you find our News Letter useful and enjoy reading it. I look forward to hear for your suggestions in improving the quality of the content. It is your valuable contribution which gets us going and through which we can know our shortcomings. And this alone will make the ENVIS Centre serve the citizens better.



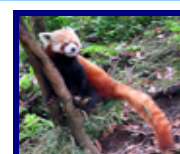
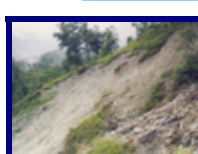
Longitude 88°00'55" to 88°55'25" E
Latitude 27°04' to 28°07'48" N
Area 7,096 sq km
Population 5,40,493 as per 2001 census



ENVIS Homepage

Inside ...

- ✚ Needs for Conservation of Bamboo Genetic Resources of Sikkim
- ✚ Butterfly Article: "Scaly Winged Wonders of Sikkim"
- ✚ Notes on a Threatened Orchid (*Satyrium Sw.*) in Sikkim Himalaya
- ✚ Abstract: A Case Study of Landslide Treatment-South Sikkim
- ✚ Wildlife Week Celebrations 2007
- ✚ International Flower Festival Sikkim 2008



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SNAPSHOTS



Hon'ble Chief Minister Dr. Pawan Chamling addressing on the occasion of World Environment Day 2007



Plantation by Hon'ble Chief Minister



Hon'ble Chief Minister watering the plantation



Plantation by Addl. Chief Secretary - Sikkim



Wildlife Week Celebration at Himalayan Zoological Park



Joint Director (Parks & Zoo) explaining the map of Himalayan Zoological Park to the Addl. Chief Secretary



Needs for Conservation of Bamboo Genetic Resources of Sikkim

**Tika Prasad Sharma, State Medicinal Plant Board,
Department of Forests, Env. & W/L Management, Gangtok**

Bamboo a vernacular term used for the members of subfamily "*Bambusoideae*" of the family *Poaceae* is the most familiar group of plant, valued equally by the artists, craftsman and scientists.

The bambusoid grasses comprising the woody and herbaceous bamboo are represented by 75 genera and 1250 species in World (Soderstrom & Ellis, 1987). There are 128 species belonging to 23 genera in India (Seethalakshmi & Kumar, 1998) of which 28 species, one variety and one forma under 9 genera are recorded in Sikkim (Tika & Borthakur, 2007).

The studies of detail distributional feature shows that bamboo resources in Sikkim are depleting on an alarming rate due to unscientific harvesting, forest fire, gregarious flowering etc. *Phyllostachys nigra* (**Kalonigalo**) *Sinarundinaria microphylla* (**Deonigalo**), *S. polystachyum* and *S. pantilingii* (**Rani malingo**) are rare in Sikkim. There is no other plant equivalent to that of bamboos as important to the rural people. It is one of the fastest growing plants and quick renewable resources with great economic, socio-cultural and ecological significance. So, conservation of this valuable green wealth of the state is the need of the hour.

The bamboo genetic resources can be conserved by utilizing following methods and strategies.

1. Establishment of Bambusetum:

The bambusetum must include all the available genera, species in the state, region. This ensures *ex-situ* conservation and also acts as center for experimental studies.

2. Creation of Bamboo Sanctuaries:

The species endemic to particular areas, these may be protected *in-situ* by creation of gene sanctuaries. For e.g. the *Sinarundinaria microphylla* (Deonigalo) is found in Deonigalee Dap of West Sikkim. The area of occurrence need to be surveyed to pinpoint the habitats and should be conserved by creating gene sanctuaries of bamboos.



Melocanna baccifera (**Philimbans**)

3. By utilizing wastelands:

The wastelands can be used to plant the bamboo species which will protect the soil from erosion and the eroded wastelands can be developed, useful to conserve various bamboo species.

4. Scientific management of Bamboo forest:

The drier clumps become a source of fire which is very dangerous to the forest ecosystem, therefore when the sign of flowering appear, at least 70% of the clumps should be harvested and the balance 30% clumps can be retained for production of seeds.

5. Establishment of nature reserve:

The areas covered by rare species should be conserved as nature reserves.

6. Training:

The local people should be trained by imparting scientific knowledge in harvesting bamboo culms for commercial use, highlighting the importance of conservation of this valuable green wealth of the state.

Scaly Winged Wonders of Sikkim

Bhoj Kumar Acharya, Karma Zimpa Bhutia IFS, Sandeep Tambe IFS and S.Anbalagan IFS



Orange Oakleaf

Insects have catered to the aesthetic needs of human being since time immemorial. They represent a diverse group of small organisms starting from disgusting mosquitoes, bedbugs, flies to highly beneficial silkworm, honey bee, lac insect and resplendent butterflies.

Butterflies are beautiful insects that have scaly wings. The different colour scales determine the colour pattern of butterfly. They are active during daytime and can be seen fluttering from one flower to another in search of nectar. There are four stages in the life cycle of butterfly. They are *egg, caterpillar, pupa and adult*. The butterflies that we see represent the adult stage. A butterfly completes its life cycle in about 3 months; however an adult butterfly lives only for 15-20 days. We often consider moths also as butterflies but both of them are entirely different organisms having distinct characteristics. Moths, like butterflies, also are insects with scaly wings. They have more scales and hair than butterflies. They are active mostly during night and are attracted to light. They are not as colourful as butterflies. The moths and butterflies also differ in flying patterns and other behaviors.



Yellow Orange Tip



Cruiser

Owing to the high variation in vegetation and climate and its unique geographical location, Sikkim represents one of the hotspots of butterflies in the world. Out of about 1500 species of butterflies in India, nearly 700 species are found in the state. Sikkim represents a mere 0.2% of the geographical area of the country, but harbors nearly 50% of the butterfly diversity.

The high diversity of butterflies has endowed them to inhabit different habitats, forests and climatic conditions. They are found everywhere right from the tropical valleys to the alpine meadows. However they are more abundant in the hot, humid river valleys and their number reduces with altitude. In Sikkim, some of the butterfly hotspots are Namprikthang in Dzongu, Rangrang, 32 number camp, Namphing-Pabong near Sirwani, Theeng near Chungthang and Legship.



Large Yeoman

The butterflies show distinct seasonal pattern. The spring months of March, April and May and the autumn months of October and November are the best season for observing butterflies. During peak monsoon from June to August and peak winter from December to February the number of butterflies goes down. Sunny mornings between 8 am to 12 noon are best for observing butterflies.



Orange Oakleaf



Azure Sapphire

Pictorial field guides aid in butterfly identification. For Sikkim “*The Butterflies of Sikkim Himalaya and their Natural History*” by Meena Haribal is the best field guide covering 400 species of butterflies. Patience is the virtue of butterfly watching. Wait for them to come to you. Butterflies are not only fragile but also shy and hence care should be taken not to disturb and catch them. Carry a good field guide for field identification. A camera will be an added benefit. They bask early in the sunny mornings, which is the best time to photograph them.

Butterflies exhibit different kinds of behaviour. They are seen puddling in muddy ground, basking on plants or rocks, sailing majestically in the air, fluttering in the flowers and flying high above the treetops. Like birds, butterflies also migrate.

They have directional movement from one place to another, often long distances up to 3000 km, in search of food, mate and shelter. Patrolling behavior, usually exhibited by male butterflies, by way of random movement within their territory to keep away other butterflies. They also have hill topping behavior which is the tendency of butterflies to occupy vantage positions especially tree tops, hilltops to identify food sources. Sometimes many butterflies of different species congregate in wet, muddy grounds to obtain minerals. Basking i.e. sitting flat on any surface with their wings open to warm themselves is usual behavior exhibited by butterflies in the early morning hours.

Butterflies have many important roles in nature. They play a vital role in pollination of flowers. They also are important food for birds, lizard, spiders, preying mantis and other organisms. Owing to their resplendent colours and patterns they add to nature’s beauty and of late butterfly parks have been developed to attract tourists. Being sensitive to changes in environment, they are good indicators of changes in climate, habitat and environment. Conservation of butterflies is a great challenge among present day ecologist. Habitat damage resulting from construction activities and spreading of weeds pose a distinct threat to the long-term survival of butterflies. It causes the loss of larval food plants and adult breeding and feeding microhabitat. Collection of butterflies for commercial purposes poses another threat. All the butterflies of the state are protected under the Wildlife (Protection) Act – 1972. Catching or killing butterflies even in your own backyard can put you behind bars. Butterflies like Kaiser-I-Hind, Bhutan Glory and some Apollos are so rare and protected that killing them invites the same punishment as killing a tiger or lion.

The beauty, behaviour and the variation in size of butterflies astonish anyone who carefully observes them. The largest butterfly of Sikkim is Common birdwing (wing span- 14-19 cm), whose size is equivalent or even larger than some of the smallest birds. The smallest butterfly of Sikkim is a Common brownie (wing span 1.4-2.5 cm), having few mm body size. Many species such as Bhutan Glory, Red Appollo, Blue Tiger are rare & endangered. Sikkim is also blessed with many beautiful butterflies. Kaiser-I-Hind, Bhutan Glory, Peacocks and Apollos are magnificent scaly winged insects.



Common Map



Popinjay



Blue Duchess



Common Birdwing

Threatened Orchid (Satyrium Sw.) in Sikkim Himalaya

A.K.SAHOO & A.A.ANSARI

Botanical Survey of India, Sikkim Himalayan Circle, Gangtok

Sikkim, a small state in Eastern Himalaya enjoys the floristic elements of tropical, subtropical, temperate and alpine flora in the altitudinal range of 200-5000m. Orchids having fascinating flowers of diverse morphological shape, size and colour usually grow either as epiphytes or terrestrials with a few saprophytes. The state possess 523 species of orchids. *Satyrium Sw.*, a terrestrial orchid has ca 170 species distributed in South Africa, Madagascar, Arabian peninsula and in tropical Asia. Only 1 species with 2 varieties are represented in India, particularly in western & eastern Himalaya including Sikkim.

Satyrium nepalense D.Don var. *nepalense* is widely distributed in J&K, Himachal Pradesh, Uttarakhand, Nepal, Bhutan, Sikkim & Arunachal Pradesh. However, *Satyrium nepalense* var. *ciliatum* (Lindl.) Hook.f. is uncommon and restricted to some pockets of Uttarakhand, Nepal, Bhutan & Sikkim. During a plant collection tour in September 2007 to Tsomgo Lake catchment area of East Sikkim, this terrestrial orchid was spotted, studied in the field, and herbarium specimens were collected, preserved, processed and deposited at BSHC as a reference material.

Satyrium nepalense var. *nepalense* with pink flowers grow luxuriantly, whereas *Satyrium nepalense* var. *ciliatum* has only been observed in one patch with 8-10 plants. A brief description of this interesting and threatened orchid with photographs and relevant data is provided below for easy identification and attention for its protection by *in-situ* & *ex-situ* conservation measures as the population in wild is dwindling fast due to indiscriminate collection and habitat loss.

Satyrium Sw.

A terrestrial, erect, leafy herb, 20-50cm high; inflorescence terminal; flowers pink or white, showy; sepals oblong entire; petals spathulate to lanceolate; lip erect, spurred; column erect, incurved; stigma hood 3-lobed; pollinia 2; rostellum 3-lobed; viscidia 2, attached to pollinia.

Etymology:

The generic name *Satyrium* is derived from the Greek terminology *Satyrion* (satyr), referring to the traditional aphrodisiac properties of tubers of plant since early herbals of Dioscorides.

Key to varieties:

Leaves ovate-lanceolate; flowers mostly pink; spurs longer than ovary
----- var. *nepalense*

Leaves oblong-lanceolate; flowers usually white, rarely pink; spurs smaller than ovary
----- var. *ciliatum*



Satyrium nepalense var. *nepalense* at
3185 m (E.Sikkim): **Common**



Satyrium nepalense var. *ciliatum* at
3132m (E.Sikkim): **Threatened**

Satyrium nepalense var. *nepalense*

D.Don, Prodr. Fl. Nepal. 26. 1825.

Terrestrial herbs, 10-60cm high; leaves ovate-lanceolate, 4-20×2-8 cm, clasping the stem; flowers fragrant, pink; lips orbicular, hooded, keeled; spurs 2, longer than ovary.

Distribution: E. Sikkim: Tsomgo lake catchment area, 3185m; 11-09-2007
Specimen studied: SAHOO, A.K. 29692(BSHC-6 nos).

Satyrium nepalense var. *ciliatum*

(Lindl.) Hook. f., Fl. Brit. India
6(1):168. 1890. *Satyrium ciliatum*
Lindl., Gen. Sp. Orchid. Pl.: 341. 1838.

Terrestrial herbs up to 30cm high; leaves oblong-lanceolate, 10-15×2-3cm, clasping the stem; flowers generally white, rarely pinkish-white, floral bracts reflexed, acute to acuminate up to 2 cm long, petals ciliate; lip with spur shorter than ovary.

Distribution: E. Sikkim: Tsomgo lake catchment area, 3132m ; 17-09-2007
Specimen studied: SAHOO, A.K. 31583(BSHC-2 nos.).

References:

Banerji, M.L. & P. Pradhan. 1984. The Orchids of Nepal Himalaya. p.130-133; Deva, S & H.B. Naithani. 1986. The Orchid Flora of North West Himalaya. p.201-203; Lucksom, S.Z. 2007. The Orchids of Sikkim and North East Himalaya. p.224-225; Pearce, N.R. & P.J. Cribb. 2002. Flora of Bhutan (The Orchids of Bhutan) 3(3):192-195.

Acknowledgements:

The authors are grateful to Dr. M. Sanjappa, Director, BSI for the facilities.

A Case Study of Landslide Treatment-South Sikkim

C. Lachungpa, IFS
Conservator of Forests (Land Use & Environment) –cum-
Programme Coordinator (ENVIS Centre Sikkim)

Since our earth first appeared, it has been shaped by erosion and for over 7000 years human beings have tried to defend their lands against the assaults of rain and runoff energies. Like-wise today, Sikkim is also facing great challenges to protect our natural resources from land degradation and erosion.

After fertility test and soil profile analysis, it was found that “Gravelly Loamy” sand is predominant through the catchment area of erosion slides in South Sikkim. Due to the highest percentage of gravel and sand, water holding capacity of soil is very negligible and hence, the average moisture content of soil is restricted to only 7% per gram of soil sample through the landslide. Gravel percentage is very high and water can easily pass through it, as a result, a flush of rain may erode huge mass of gravel with sand in the slope. It is known from the Soil fertility test that soil is also NPK deficit with acidic condition. So, in this poor condition, soil does not permit the growth of any vegetation in erosion slide, even Xerophytic plant can hardly survive. Plants like *Alnus nepalensis* are very dominant in landslides of Sikkim. It has the ability to fix atmospheric nitrogen in soil which finally gets converted to nitrate fertilizer with the help of some bacteria encysted inside the root nodule of the plant.

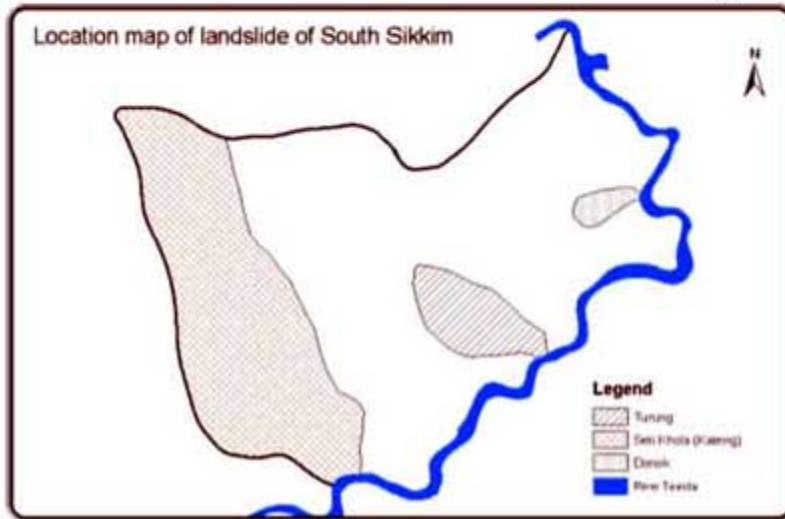
In order to improve the fertility status and soil profile in South Sikkim, mulching method is applied in the erosion slide in extensive manner. Mulches of leaves, stubbles, straw etc. totally covers the surface layer of the soil which prevents the organic top layer from being washed away by rainfall. Mulches decay afterwards due to the microbial activities which enhance the organic content of soil and also help in the retention of moisture in soil. So, the method of mulching is significant in various ways to enhance the fertility status.

Application of organic manure could be eco-friendly method to increase the organic content of soil in erosion slide but it is very expensive. Applications of inorganic synthetic fertilizer also help to improve the soil quality but it can evoke several environmental problem like algal bloom, biomagnifications etc. So, in another way round, implementing agencies of erosion control work are selecting some species of the plant which have ability to fix the atmospheric nitrogen in the soil.

After study of vegetation density and their adaptation in the erosion slide, following tree species were selected and sown in the field. As a result, nearly 80% vegetation survived in afforestation zone nearby erosion slide despite of having nutrient deficit soil. *Anthrocephalus cadamba*; *Erythrina indica*, *Bischofia javanica*, *Terminalia myriocarpa*, *Agave americana*, *Schima wallichii*, *Alnus nepalensis*, *Bambusa nutants*, *Dendrocalamus hemlintonii*, *Cephalostachym capitatum*, *Populus* sp.

Many sod forming grasses like *Cynodon dactylon*, *Imperata* sp., *Chrysopogon* sp. *Thysanolaena* sp. was already selected and planted in erosion slide. These plants actually forms sod and cover the whole area so that top most soil is prevented from erosion. Most of the sod forming grasses is seasonal. It decays to add the organic nutrient to soil and again reappear on return of favorable seasonal condition covering surface. Vegetation propagation is also depending upon the moisture content of soil which is very low in South Sikkim. In order to raise the moisture level in the soil, tillage method is applied in many slides and result is satisfactory.

Throughout the whole span of survey, it was fairly noticed that biomass had drastically improved either in terms of vegetation invasion or in fertility status, because almost all the degraded land was covered by vegetation. However some part of landslide is very stiff and rocky, which need mechanical method as control measures.



The velocity of runoff and landslide has been checked by cross sausage wall



Shifting of landmass has been partially protected against heavy runoff by sausage wall



Runoff energies being checked by sausage wall

Wildlife Week Celebration 2007

53rd Vanya Prani Saptak

October 1-7, 2007

MESSAGE



Dr. Manmohan Singh
Hon'ble Prime Minister, India

Our sub-continent is a microcosm of our planet in terms of biological diversity and the range of flora and fauna we have here. From the rain forests of the Andaman and Nicobar Islands to the dry desert of Western India and from the humid coastlines of peninsular India to the alpine meadows of the Himalayas, India is home to plurality of life forms.

Conservation of biological wealth is a national priority. Our quest for development has to strike a balance with conservation of the environment and its biodiversity. We need to live in harmony with nature. The greatest example of this is the life of Mahatma Gandhi. On this occasion of the wildlife week, which coincides with the Mahatma's birth anniversary, I call upon my countrymen to follow his example and to pledge to protect our wildlife and biological resources for prosperity.

R.O No. 453/IPR/PUB/07-08
Date: 1.10.07



Dr. Pawan Chamling
Hon'ble Chief Minister, Sikkim

Sikkim is a tiny part of the Indian sub-continent and still forms a part of the famous eastern Himalayan Biodiversity Hotspot; i.e. it is an ecologically fragile spot on the face of our blue planet, which is the only known planet in the universe that supports life. We humans are just one of the magnificent varieties of life or biodiversity on this planet Earth.

Sikkim occupies a pride of place in the Northeast India. We boast on our green image and steps taken by all Sikkimese in preserving this. We are slowly making our mark as an eco-friendly tourist destination. As more wildlife watchers for birding, butterflies and other natural enthusiasts visit our beautiful small state, most of our youth will come in contact with the reality of having a passion and hobby that cannot only uplift the soul but also economically benefit in both short and long terms.

Conserving this living wild wealth in now our priority and we need to strike th right balance between sustainable development of our fragile state and conserve our natural welfare long term benefits for our future generation. Let us spread this wareness by keeping mind, "*Ahimsa Paramo Dharma*"

R.O No. 453/IPR/PUB/07-08
Date: 1.10.07

Wildlife Week Celebration 2008

Message by N. T. Bhutia, IFS, Chief Wildlife Warden, Sikkim

'Wild' 'Life': The phrase conjures up glamorous images of flamboyant pheasants, bedazzling butterflies, opulent orchids and red rhododendron swaying in the sun, or pretty pandas peeping from behind old oaks. To the lay person, it also means dangerous beasts waiting to pounce upon us. To the poor farmer it can mean the pests preying upon his crops, the birds descending on his field to eat the ripe grain and devastate him.

Despite a lot of information available, there are still many who are afraid of snakes. It is time we realize that the most dangerous beasts on this lonely planet Earth are WE ourselves. We hold the lives of almost every species on this blue planet in our hand. The fate of so many species depend on our way of thinking today.

But, what are we without the diversity of life that makes our planet livable? We are but beginning to understand the myriad complex link that connect plants, animals and their environment in an interdependent relationship.

In India, forests and Wildlife have been protected since the vedic period. There were '*Abhayaranyas*' in which we protected animals, birds even plants with religious sentiments. '*Ahimsa Paramo Dharma*' was the guiding spirit of our way of life. *Artha shastra* of Kautilya and emperor Ashok's 5th pillar edicts prohibited killing and prescribed many laws for protection of forests and wildlife.



Active Participation of School Children

We in Sikkim have always been aware of our natural wealth. We live amidst it but are allowing ourselves to forget its importance and value to us. The snow leopard, blue sheep, red panda, pheasants are but show pieces of our rich and precious environmental heritage.

Even small birds and insects have important roles to play in our lives. In various role, wild birds protect our crops from harmful insects. Many insects themselves, for example the small ladybird beetle eat crop pests. Spiders spreading their web snare mosquitoes and houseflies which are dangerous to our health. Frogs and snakes are farmer's friends.

For human welfare, whether rice or conifers, cattle or honeybees, all are important. Everyday in our lives, every man, woman and child depend on living plants and animals for vital parts of their welfare. We depend on our precious renewable environmental resources for all our food, half our medicines, much of our clothing, much of our fuel and building materials as well as for spiritual and mental welfare.

Non-renewable mineral resources can supply fuel, building materials and some artificial fabrics but not all other needs. Our future thus depends almost entirely on our capacity to conserve the proverbial goose that lays golden eggs. Extinction is for ever.

Let us keep this in mind and dedicate ourselves to conserve our beautiful and precious environment and its endangered wildlife during this week which is also dedicated to the Father of our nation; Gandhiji.

- N. T. Bhutia, IFS
Chief Wildlife Warden

International Flower Festival 2008 @ Sikkim

14-16th March 2008

Venue: Saramsa Garden, Near Ranipool, East Sikkim

Event Profile

International FloriShow Sikkim is the first professional floriculture exhibition principally of orchids in nature's own garden Sikkim, home to over 600 species of orchids. It will provide an excellent opportunity to bring together the professional orchid growers of Sikkim with importers and input suppliers from India as well as abroad.

Visitor Profile

The targeted visitors at International FloriShow Sikkim are: Potpourri manufacturers, florists, corsage bouquet designers, interior coordinators, garden designers, flower designers, bulk buyers, wedding planners/companies, botanic gardens, growers & breeders, greenhouse flower growers, nurserymen, horticulturists & floriculturists, farmer's cooperatives and also the professionals related to flower processing, event halls, hotels and restaurants, gardening shops, gift shops.

Exhibitor Profile

Targeted exhibitors at International FloriShow Sikkim would be professionals engaged in: Greenhouse construction, gardening, horticultural supplies, climate control, poly greenhouse & glasshouse, flower vases, tissue culture units, nursery stock supplying, seeds, medicinal plants & herbs, processed flower, baskets, rooted and unrooted cuttings suppliers, bouquets, dried flowers, artificial and silk flowers, preserved & pressed flowers, potpourri, irrigation & fertigation system, flower & plants, bonsais, candles, air freshener.

The tiny state of Sikkim, famous for its flora which is in full bloom during March-May has around 600 species of orchids, 240 species of trees and ferns, 150 varieties of gladioli, 46 types of rhododendrons along with a variety of magnolias and many other foliage plants. The main displays in the flower show are orchids, gladioli, roses, cacti, alpine plants, creepers, climbers, ferns, herbs etc.



Dr. Pawan Kr. Chamling
Hon'ble Chief Minister, Sikkim

“Right message must reach to the people that the flower cultivation or growing is a noble profession which can be rewarded suitably”.

A rare show of exotic varieties of flowers, orchids and other plants held in peak flowering season is a spectacular event attracting people from all over the world.

To boost the initiative, Chief Minister Dr. Chamling has added that there will be an open competition for wild orchids and the cash prizes for first, second and third winners would be Rs. 1.50 lakhs, Rs. 1 lakh and fifty thousand respectively. Three best stalls too would be awarded with cash prize of Rs. 2 lakhs, 1.50 lakhs and 75 thousands respectively. In the national level, the prizes carry the cash amount of Rs. 3 lakhs, Rs. 2 lakhs and Rs. 1 lakhs for the winners in first, second and third positions respectively. Similarly, in the international level, the prizes carry the cash amount of Rs. 5 lakhs, Rs. 3 lakhs and Rs. 2 lakhs respectively



ENVIS Centre SIKKIM

(On Status of Environment & its Related Issues)
Forest, Environment & Wildlife Management Department
Government of Sikkim, Gangtok



जसों है दय्याली ।
वहों है खुशहाली ॥

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SNAPSHOTS



Wildlife Week Celebration 2007: Students in action



State Animal: Red Panda



Orchids: The Essence of Sikkim Flowers





ENVIS CENTRE SIKKIM

ENVIRONMENTAL INFORMATION SYSTEM
On Status of Environment & Related Issues of Sikkim

This Centre is functioning under the over all administration of the PCCF-cum-Secretary, Forest, Environment & Wildlife Management Department with the supervision and guidance of Additional PCCF, CCF and Conservator of Forests of Environment sector. The day to day affairs of the ENVIS centre are being managed by the Conservator of Forests, Land Use & Environment Circle, who is also the Programme Coordinator for ENVIS Centre Sikkim. The centre also has one Programme Officer, one IT Assistant and one Technical Project Associate to look after the needs of collection, compilation, database development, updating of information on the database and websites, publication of news letter, etc.,

The Centre has been established at the ground floor of the annex-II, Forest Secretariat, Deorali, Gangtok 737102.



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Government of India

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* Please send your valuable feedback at <http://www.sikenvis.nic.in/feedback.htm>