

The Phansad Wildlife  
Sanctuary Handbook

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**Photo Credit**

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## Preface:

The WWF's Volunteer Training Programme (VTP) undertook a three-day camp at the Phansad Wildlife Sanctuary from December 3 to 5 1999. The aim of the camp was to familiarise the volunteers with the intricacies of various types of ecosystems and the biodiversity contained therein.

This handbook is based on the experiences of volunteers during their camp, through which they have tried to give readers an introduction to what Phansad Wildlife Sanctuary is all about.

The camp comprised two nature trails through the forest; the first one was an evening trail to a waterhole and the other a morning trail.

Two visits to the beach, of Rawedanda and Kashid were devoted to observing marine life as well as a trip to the sea-bound fort of Murud-Janjira. But hey, it was not serious stuff all the way. We had plenty of interactive sessions, star-gazing, naps, long walks, and good food – in short, a whole lot of fun.

While we have penned our observations in this handbook, it is by no means, a complete picture of what the Phansad Wildlife Sanctuary is all about. There's definitely a lot more to the place. However, as amateur naturalists, what we have managed is a pretty good job, even if we say so ourselves. We hope this handbook helps to serve as an introductory book of reference to others who may wish to visit Phansad and discover its natural beauty.

Very little has been edited in this book, so as to let the originality of each article remain intact. As one would go through this book, one would realise that some of the volunteers have given their articles in the narrative form and some in the form of the statement of facts. Each one has his/her own way of writing and it is the contribution of each person that has made this handbook possible. We hope that those who read this handbook will experience, albeit second-hand, the excitement and sense of adventure that the members of the VTP experienced when in the Phansad Wildlife Sanctuary.



## Facts on Phansad :

Before India gained Independence the Phansad Wildlife Sanctuary was owned by the Nawab of Janjira Sansthan. Siddhi (king at that time) used it as a hunting arena. The sanctuary's peripheral boundary is 99 kms long and it is situated at a hilly height of 1175 feet. The rock type is basaltic and lateritic.

The forest that stands on the sanctuary is of two types; Tropical evergreen forest on the plateau and Tropical moist deciduous forest on the hillslopes.

**Flora:** There are some 348 species of trees found within the sanctuary (article about the flora in the course of the book). They include the Sag, Ain, Kinjal, Jambha (surya), Sawar, Kokam, Amba, Anjani, Parjambhul, Asana, Hed and Lokhandi as well as climbers such as Garambi, Omali, Kawali, Ramrakh and Anantmul.

The sanctuary is home to mammals such as panthers, sambars, barking deer, giant squirrels, monitor lizards, hyenas, mouse deer and snakes such as python.

About 160 species of birds are found in the sanctuary including peafowl, kingfisher, hornbill, green pigeon and pitta. Fifty-two species of butterflies wing their colourful way through the forest. At the nearby coast some 30 types of shells have been found.

The plan of a wildlife sanctuary in the region was formulated with financial support of the World Bank under the Maharashtra Forestry Project Plan (1993-94). It included:

### [1] Eco-development planning

- i) Formation of water bodies
- ii) Nalla bunding
- iii) Protection and fencing
- iv) Nursery development

### [2] Rural area development programme

- i) Bamboo plantation
- ii) Plantation on waste land
- iii) Plantation on farm bunds
- iv) Grassland development
- v) Stove distribution

The special feature of the sanctuary is its flora, which is also found in the high altitude of Mahabaleshwar and Matheran, like Memeceylon, and fauna like Giant Squirrel.

#### Problems of management-

- 1) **Fire-wood collection-** The sanctuary is surrounded by human population of 39 villages. Almost all of the families in these villages are dependent on the sanctuary area for their requirement of firewood. So fire wood collection from the sanctuary area is a major problem of management.
- 2) **Grazing-** Grazing was permissible as per grazing settlement report. The cattle population of 39 villages on the periphery of the sanctuary is much higher than the permissible figure under the grazing settlement since there is no other alternative to meet the requirement of fodder.
- 3) **Illicit felling-** As the sanctuary contains good percentage of teak and other superior *anjani* species. It is vulnerable to illicit felling. The forest areas of Danda and Shiloshi are susceptible to illicit felling.

Old villagers residing near the sanctuary have stories to tell of the abundance of wild life during the Nawab period. The number of wild animals have dwindled considerably due to poaching and destruction of habitat in the past.

#### The work under progress is as follows:

1. Collection of different species of butterflies and moths is underway and 48 species have already been collected.
2. A herbarium with 250 species awaits more addition.
3. Shell collection has been undertaken.
4. A bird list of 67 species is available.
5. Collection of household-wise data of firewood and fodder requirement by the villagers who are residing on the periphery of the sanctuary, so as to calculate the magnitude of the dependence over sanctuary area is on.

6. Habitat improvement works which include plantation of bamboo in 2 hectares at Bhoighar is underway.

7. A compound wall around residential quarters at Mazgaon is being constructed.

8. An information centre and dormitory is being constructed at Mazgaon.

9. A management plan is being prepared.

Status of inquiry regarding rights and privileges:

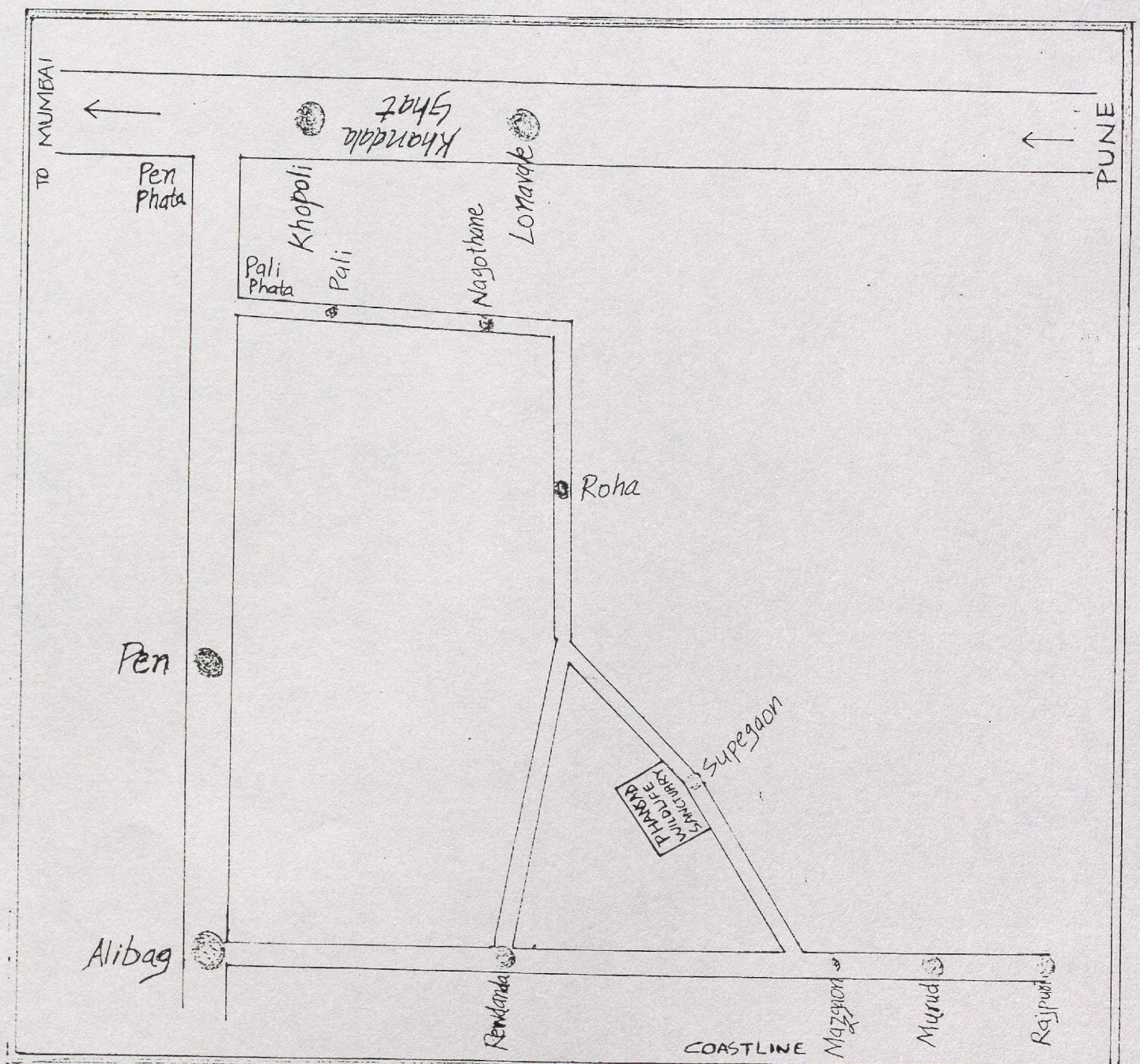
For the sanctuary area under Murud taluka an inquiry has been finalised by the Deputy Collector of Alibag and inquiry report has been submitted to the Collector of the Raigad district. But some discrepancies have been found regarding notified area, which are not tallying with the revenue record. So the revenue records are being verified. The discrepancies occurred, due to transfer of some land in the name of private persons by revenue department. And some discrepancies have been found while preparing consolidation scheme. For the sanctuary coming under Roha taluka, an inquiry has been finalised by the Deputy Collector, Mazgaon and an inquiry report has been submitted. A draft for the final notification can be prepared after the boundaries of the Sanctuary are clearly and finally demarcated.

-Contributed by Mrudul Patil



## How to Get There:

The Phansad Wildlife Sanctuary is 200 Km away from Pune and 15 km away from nearest town Murud. To reach Phansad there is a S.T bus from Shivajinagar Bus Stand. One has to take Pune -Murud Bus and get down at Murud. From Murud there is a local S.T i.e Murud -Roha. The Phansad Wildlife Sanctuary is situated in Murud Taluka and the Main Entrance of Sanctuary is at Supegaon Village (which is on Murud-Roha road).



## *An Insight to the Floral Diversity of Phansad Wildlife Sanctuary.*

Nature has bestowed upon many interesting and spell bounding things. One of the most primary and unique component of it is plant world. The plant world is composed of variable ecosystems, which design and determine the very nature of its role.

Maharashtra has very peculiar kinds of forests. A part of 'Dandakaranya' was located in Maharashtra. The Western Ghat or Sahyadri is also considered as a hot spot of biodiversity in India.

The forest type of Phansad is a **moist deciduous** type with some semi-evergreen and evergreen patches. We visited Phansad during the first week of December. The period is in **transition** between the flowering period of herbs and flowering period of trees. Still flowering of some beautiful trees was the major attraction of our tour. During the trip we have visited two major types of ecosystems at Phansad viz. **Forest Ecosystem** at Phansad and **Marine or Coastal Ecosystem** at Murud and Kashid.

The Phansad forest is very rich and diverse in plant species. The members of family **Lauraceae** are characteristic of evergreen vegetation. During our visit we have sited members of family Lauraceae like *Beilsschmiedia dalzelli*, *Alsodephnae semicarpifolia*, *Persea*, *Actinodephnae hookeri* in some evergreen patches. One noteworthy feature which attracted us was the flowering of 'Palas' tree i.e *Butea monosperma*. It was fascinating to see the bloom of *Butea*, which makes one feel as if the tree is on flame. Therefore it is referred as **Flame of Forest**. The middle and upper canopy was decorated by handsome blooms of 'Wakeri' or *Waghtea spicata*. The 'Sawar' or *Bombax ceiba* was also in the flowering. The giant 'Lianas' or *Entada spp* or 'Garambi' was also seen. The 'Lianas' has a pod of about 5 feet. It is one of the largest legumes in plant world.

The most common elements from Phansad forest was 'Kinjal' or *Terminalia paniculata*, 'Haldu' (*Aldina cordifolia*), 'Kumbha' (*Careya arborea*), 'Gela' (*Randia dumatorum*). The peculiarity of the forest was the **Malabar** variety of Teak (*Tectona grandis*). The 'Shivan' tree (*Gmelina arborea*), 'Kokum' (*Garcinia indica*) and 'Dhup' (*Canarium strictum*) which is not so common in Maharashtra.

The key species of forests of Western Ghats like *Memecylon umbellatum* and *Carvia callosa* were also found in Phansad.

The water bodies has a very significant role in any forest ecosystem. The presence of certain plant species characteristic of water bodies were found, which prove the significant role of any waterbody. The vegetation near water body was dominated herbaceous members like *Jussia suffruticosa* i.e 'Panlawang'. *Pandanus tinctorius* i.e 'Kewada', *Plygonum glabrum* i.e 'Sheral'. The tree vegetation consisted of 'Surangi', 'Ashoka' etc.

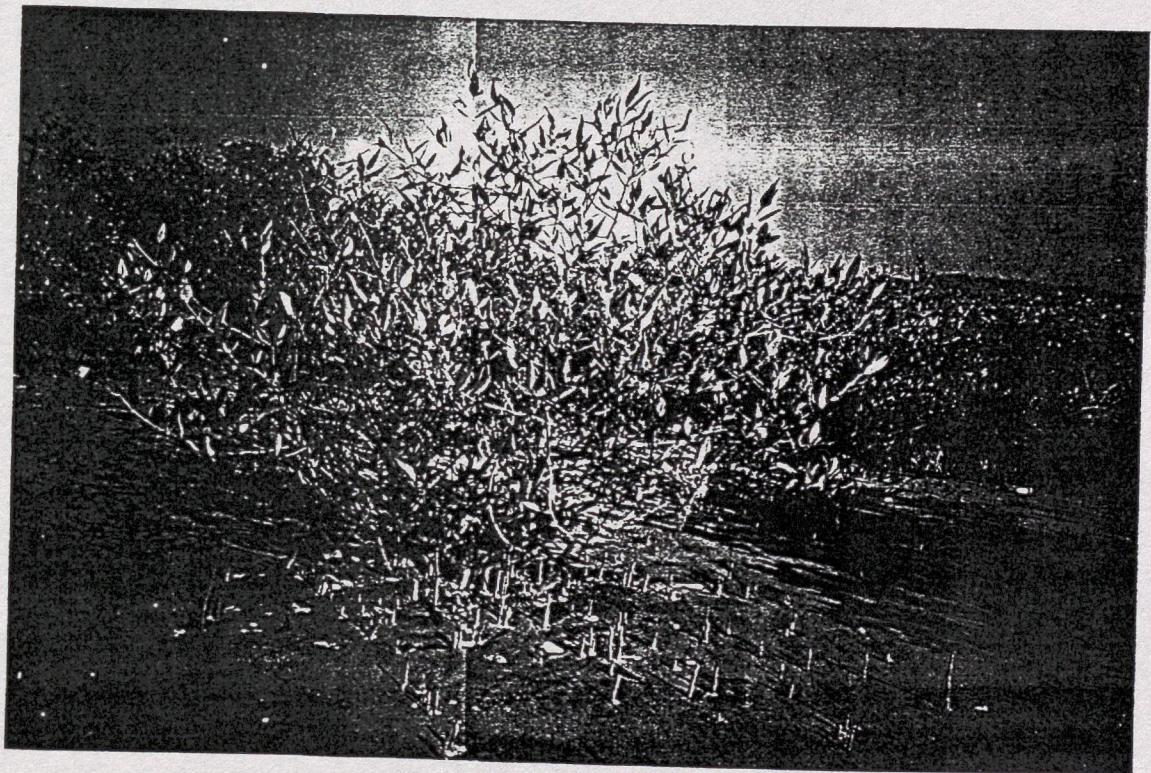
Murud is known for its Sandy beach and its typical vegetation for prevention of soil erosion. The Mangrove vegetation is at climax in the creek of Rajpuri. The Mangrove species like *Avicennia marina*, *Acanthus ilicifolius*, *Cerops tagal*, *Rhizophora mucronata* are very common. Rare Mangrove like *Bruguiera cylindrica* can be seen in dense mangrove patch. Plants near to coast like *Ipomea biloba* (Maryad vel), *Pandanus* and *Clerodendron innermis* are found.

The common **fungi** in the Phansad forest are *Flavodon flavus*, *Hexagonium*, *Microporus xanthopus*, *Ganoderma* which are wood-rotting in nature. Many rusts are also seen in the forest.

**Algae** which are collected on Murud beach were mainly *Ulva*, *Fucas*, *Sargassum* and *Ectocarpus*.

Certain initiative steps are taken to conserve the biodiversity of this area by declaring it as a WildLife Sanctuary. But for further upkeep of this sanctuary concrete conservation steps are needed. This can be achieved with the aid of people's participation under the guidance of vigilant environmentalists and naturalists.

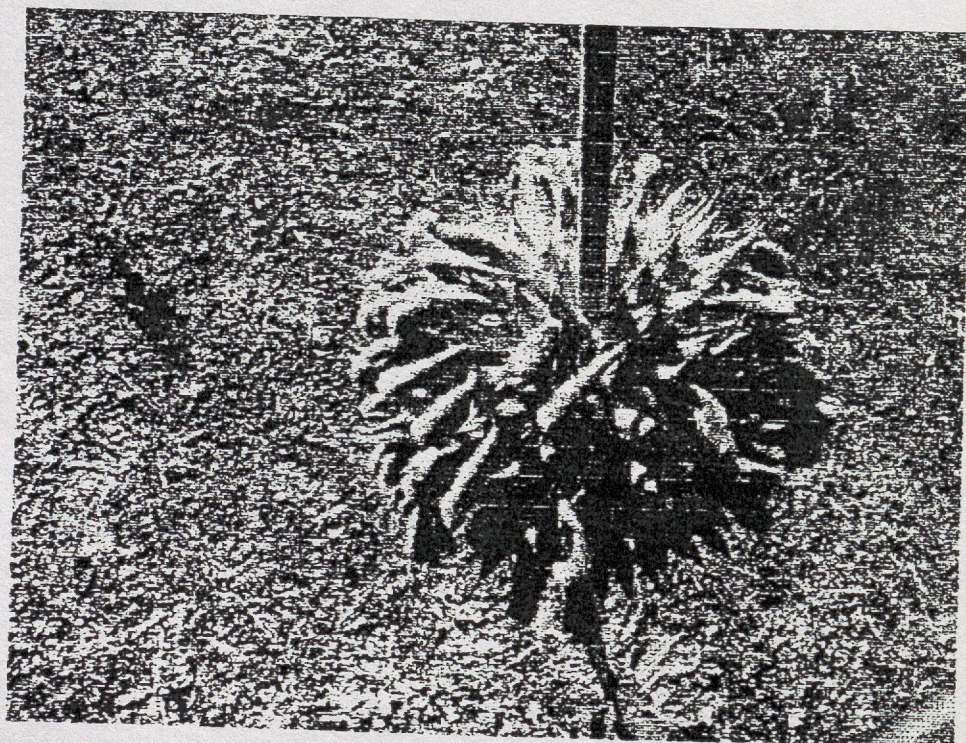
**-Mandar Datar**



Mangroves



*Hemedesmus indicus* (Anantmul)



*Leonotis* (Deepmala)

## The hands-on approach

Early on the morning of December 3, a group of students of the VTP left for Phansad Wildlife sanctuary. We were 10 of us in a Tata Sumo and our spirits were high with fresh enthusiasm for this was our big trip of the course. Rahul Rao and I were the two so-called knowledgeable ones and that gave us the privilege of sitting in the front seat. The ride was very comfortable and before we knew it, we were already at Alibag. We stopped to have a lavish breakfast and stretched ourselves. Erica (a.k.a Mother of Two), Mark and Ash entertained us through the journey in their usual way. We made a nice bunch of tens who got along well. Yashu, my little one too was comfortable in company of Mark, who goes out of his way to make him feel important. To add to it we had good weather and decided to put the extra time for a good cause. We had to reach our destination, Phansad Wildlife Sanctuary by 3 p.m. So we decided to explore the 60 kms of coastline from Alibag to Nandgaon Phata.

We stopped over at the Ravedanda Pond to have a brief session on birdwatching. Rahul and I refrained from rattling off the names of birds in the pond. Instead we gave the group the binoculars, and books to identify the birds for themselves. While initially they seemed a bit lost, soon they had identified the lilly-trotter (**Bronzed-winged Jacana**) and the **Little Blue Kingfisher**. They seemed to have understood the importance of self-study. I could see the joy on Mark and Erica's face on having being able to identify the bird on their own. We moved along the coast and stopped over at the Ravedanda Creek to spend some time getting to know more about **Gulls and Terns**. We were rewarded by beautiful sightings of **Hérons** and **Cormorants**. Mark even noticed the **Mudskippers** and then I realized that when we as resource people, do not have to spoon-feed these participants they bother to observe nature on their own. I think I did my job of being a substitute resource person well.

Next we stopped at Kasid beach - a golden-silver sandy yet rocky beach. Sandy beach, shingle or pebble beach, rocky beach and muddy beach are the broad types of seashores. However you can have Mixed shores and we walked and felt the soft golden-silver sand on our barefoot. It was a beautiful experience. Within no time, Yashu and Mark were playing and getting wet in the soft foaming waves of the Kasid beach.

This is the most beautiful beach close to Mumbai and within four hours of reach from Pune. I enjoy being at this beach and have visited it for the umpteenth time. Rahul and I saw a huge flock of waders scrounging around the **inter-tidal zone**. (i.e. the zone between low and high tides. It was noon and the sun was at its peak making the mirage on the sandy beach. Hence identification of individual waders was beyond us. But Rahul and I were carried away in pursuit of further birdwatching, and we forgot about the group for some 20 minutes. Everyone was by now on the sand, under the Casuarinas which had been planted by locals to act as sand-binders. What this means is that the long, thin, needle-like leaves after falling down on the sand form a sort of blanket on the beach thus preventing the sand from flying away. However Casuarinas are not of Indian (they are from Australia)

The sand and sea set the mood for the gang to relax and enjoy the beauty of the nature. Mark and Yash had to be literally pulled out from the sea and sadly we moved on to meet the rest of the group at Nandgaon Phata. They were waiting for us and had already finished their lunch. However they were envious of our Tata Sumo ride cause they had roughed it out in the local S.T. bus from Pune.

-Anchal Sondhi.

## Feathered friends: Birds on the way to Phansad

On December 3<sup>rd</sup> it was with great expectation that we were travelling to the Phansad Wildlife Sanctuary. This was the first overnight camp that we were to undertake as part of the WWF's Volunteer Training Programme. Oh! What a journey! We saw so many places and birds of such variety that we were really amazed. But we could not wait longer than necessary because we were running against time - we just had to reach Phansad before dark.

About 150 kms into our journey we came across a lake, where we saw small white dots in the background of the water. Avid bird watchers that we are, we had to stop. Some of us who were in a hurry to reach our destination were sure that they were only large pebbles shining in the sun or perhaps plastic bags - nonetheless we stopped.

Soon we realised that what we were looking at is in fact were some fascinating birds. We did not go far lest we disturb them and they fly away. When we began to observe them through our binoculars we were pleasantly surprised that there were both, land and water birds. Here are some of the birds that I spotted through my pair of binoculars.

This species of birds is frequently seen on electrical wires in large flocks. Further scrutiny revealed that these were Munias. In fact, they were White backed Munias.

In size these Munias are a sparrow minus bird, which means that the bird is smaller than a sparrow, about 10 cms. long. A resident bird, it has black and white feathers, a heavy white patch near the tail and a heavy bluish conical bill. Against the sunlight it would appear to be a White-throated Munia. However the only distinct difference that would appear between the two, is that the White-backed Munia has a wedge-shaped tail whereas the White-throated Munia has a black, pointed tail.

The White-backed Munias have a conspicuous white rump and show white abdomen while flying. Both the sexes look alike unlike other birds, where it becomes difficult to differentiate a male from a female.

They are found in open areas from Peninsular India, to the sub-Himalayan region to the east of Garhwal, West Bengal and the rest of the Indian Sub-continent.

They feed on grass seeds in flock of six to seven. They are also known to feed on ears of cereals plants in cultivation. Another way of identifying them is by the chirping noises they make.

Then there are some birds that do not fly..well almost ! Actually, this species is known to be less of a flier, and so, is at times mistaken for the Indian Shag or the house crow. In fact they are the Little Cormorants

A resident migratory bird, it nests in this part of the country between November and February. Even though it is almost the size of a jungle crow, you will never mistake a Little Cormorant to be one, due to its slender shape. One distinct feature of a Cormorant is the white patch under its bill, which is absent in the Indian Shag. It has a elongated stiff tail, with a slender compressed bill.

Cormorants are found by themselves or in flocks throughout Indian Sub-continent in the inland waters. An expert diver and swimmer, the Cormorant lives on fish which it can chase and capture even under the water. It is found on rock drying itself in a most spectacular manner with wings out stretched as though posing for a photograph.

Large egret another bird we saw at the lake is a resident migratory bird. Standing at 91cms it looks the size of a vulture. The Large egret has a snowy white plumage and thin, long, totally black legs, unlike the little egret, whose legs are black and feet are yellow. The Large egret's bill is black and yellow. It is found throughout the Sub-continent. Its common food is fish and frogs found in lakes, marshes and rivers. They nest between July and February.

Some water birds appear to be walking on water. They are the Bronze-winged Jacana, a resident bird. The female stands 3 cm taller at 31cms. A swamp bird, which could be mistaken for a moorhen thanks to a red spot over the bill, the Jacana has a glossy black head with a white stripe over the eye which continues till the nape. Like the moorhen the Bronze-winged jacana also has enormous legs. The species is found throughout the Sub-continent except Sri Lanka. It can be seen eating seeds and roots of aquatic plants and insects by the lakes and tanks

It has a short harsh grunt and also a wheezy call (*seek eek seek*).

Nature has created many spectacular birds. One such is the White breasted Kingfisher. A resident, the kingfisher stands at 28 cm with a size somewhere between a myna and a pigeon. Its bright white 'shirt' makes it look like a penguin.

Well, you would mistake it for one if there were any around in these parts, with its shortish head and straightish body! It has a brilliant turquoise blue with a chocolate brown head, which continues down to the underparts via the neck. Its long and pointed red bill makes it look like a spear gun, especially when it dives into the water like a rocket. Interestingly, the kingfisher catches hold of its prey, flies to another perch and batters its victims to death before swallowing it. Its diet includes tadpoles, lizard and grasshopper.

They don't even like the expression 'two is company' for they are solitary creatures found in cultivated and wooded country through India except in the Himalayas. They are even found away from water.

The kingfisher's call is a loud crackling noise, which it utters mostly during flight. It also has a loud unmusical chattering song perching on a tree or a telegraph wire, which you wouldn't want to hear.

While most of us are familiar with ducks there are those water birds who imitate ducks in the water. They are the Little Grebes or Dabchicks (*pandubi*)

These residents stand at 23cms and are about the size of a pigeon. They are drab little birds with white underparts, a short pointed bill with no tail; unlike a duck.

This feature would distinguish it from a duck while in water. Breeding season sees the bird wearing a dark brown and chestnut plumage on the head and neck. The upper part is rather paler. It is found throughout India and in the entire Sub-continent in rain filled ditches, and tanks. It, too is an expert diver and usually live on aquatic insects, frogs, crabs, tadpoles. Its nesting season occurs between April and October.

After leaving the lake where we spent more than one hour, we sped off towards Phansad, which was still 50 kms away. 20 kms later we came across a bridge where we saw some birds. As we were late anyway we decided that we might as well watch these birds as well.

There was this bird which had white wings and dark grey back. It happened to be a **Paddybird or Pond heron**

A resident bird, it is 46 cm tall and is cattle egret minus. It appears earthly brown while at rest, but gets totally transformed bird while in flight. It apperar to be a tail-less bird until it takes off and you can see the white rump. It changes its colors in the breeding season to acquire maroonish plumes on the back of the head and a long white crest.

Found near water throughout the Sub-continent, they are present on plains as well as heights of upto 1000mtrs elevation. They feed on frogs, fish, crustaceans and insects in a very peculiar manner. They await their pray at the water's edge and when it comes along and are known to jab at the quarry at the first opportunity.

Its nesting season is chiefly between May and September.

**Gullbilled tern** is a resident migratory and is a crow minus bird at 38 cm.

You would distinguish the gullbilled tern from other terns by its gull-like black bill and black legs. In its winter plumage it has a white head streaked with a black patch around the eye. Summer plumage sees the bird head in jet-black leading upto the nape.

It is distributed all along the country and the Sub-continent. Its eating habits are similar to that of the *pond heron*.

## -Birds in the Sanctuary.

After having spent another 30-45 minutes at the bridge, we finally left for our campsite. This time we decided not to stop anywhere. We reached the camp all tired and ready to hit the sack. But we were given a shock when the camp organizers told us that we had to get up early morning to go for a nature trail.

Next morning was nice and cold. Dressed comfortably in jackets and pullovers we left for the trail. We walked for about 5 kms without seeing a single bird. I guess it was too cold for them too. Then we came to a small clearing, where there was a '*machan*' (watch tower). By this time the sun had risen a little more to warm the area when we climbed the *machan* and it was a feast for us. We could see the trees full of birds chirping along in their own melodious tunes.

A bird hidden deep in one of the trees was making a *kor-r-r kutroo-kutroo* sound. Rahul Rao (our resource person) identified it as the **Large green barbet**. It can also be called as a *Brown-headed Barbet*. It is 27 cm and is taller than a myna. A resident of the country, the *Brown-headed Barbet* is a chubby heavy-billed grass green tree bird, with a brown upper back, which continues to its neck. Its upper breast is brown streaked with white where as the lower breast and abdomen is green. The tail coverts are bluish and the eye extending upto the base of the bill has an orange patch.

### **Crimson breasted Barbet or coppersmith.**

A resident, sparrow minus standing at 17 cm. Grass-green birds like most other barbets it is a rather heavily billed bird with a crimson breast and forehead. It has a yellow throat coupled with green streaked yellowish underparts. It has a distinctly truncated triangular tail prominent in flight.

You can find the coppersmith in-groups or solitary on *peepal* or *banyan* trees, which have fruits. They are well distributed through the union and the surrounding countries. Coppersmith seems to be imitating his human counterpart who also goes **tuk-tuk** while hitting on the copper. It makes this noise almost throughout the day other than eating fruits and berries growing on *peepal*.

**Red-whiskered bulbul**. The red-whiskered is a resident of the country. Standing at 20 cm it is a myna (-). One can distinguish a red-whiskered from the rest through its pointed black crest and crimson 'whiskers'. It has a crimson patch under the root of the tail too. Its plumage is brown above and white below, with a blackish necklace around the breast. A red whiskered can be seen in evergreen and secondary forest clearings throughout the Indian Union (excepting the arid areas of Rajasthan). It usually nests between February and August.

**Golden oriole** It is a bright golden yellow-feathered bird with black in wings and tail. It also has a black 'band' running through its eye. The female has a different plumage than the male, who has a duller and a greener appearance. One can see them singly or in pairs in wooded countryside eating figs of people trees, insects and also nectar, throughout the union excepting the North East. One can recognize a Golden Oriole through its harsh noise, sounding like cheetah or flute whistles sounding like *peelolo*.

**Slatyheaded scimitar babbler**

Its alternate common name being *Indian scimitar babbler*.

At 22 cms it is a resident myna(-).

It has a slaty head with dark brown body, excepting the breast and the throat, which is white. It has prominent white eyebrows and a curved yellow bill.

Found throughout the country, but confined to the forested areas. Feeds on insects and berries that are found while rummaging through the ground, under dense undergrowth. They keep in constant touch with each other by giving out bubbling or gurgling calls.

The **Racket-tailed drongo** -- A resident myna (+-); but at 31-35 cm over all. It is a black coloured drongo with a glossy appearance and a prominently tufted forehead. With its spatula-like wired tail, it looks as though a pair of bumblebees is following the bird. It inhabits moist- deciduous forests throughout the country. Its food involves nectar of flowers and insects. The racket-tailed is a very noisy bird having a huge collection of metallic noises. It also is a brilliant mimic. It nests chiefly between March – June.

There was also the **Grey or Ashy drongo** like its racket tailed brother which is a resident migratory and has a glossy black plumage. It is a bulbul(+) bird. The wired tail, which is present in the **Racket tailed** is missing in the **grey drongo**. Instead it has a deeply forked tail. It has crimson eyes and is duller at the back. It is found through out the country during the winter. It survives on nectar; when available, but basically on insects and smaller birds.

**Spotted dove** Standing at 23 cm it is between a myna and a pigeon. This white-spotted dove is a resident of the country. It has white spotted pinkish, brown and grey upperparts. It has a 'chess board' style hindneck. Spotted doves are found in open well-wooded country. You can also see them in verandas of bungalows. They have a kroo-kroo-krukoo....kroo-kroo

**Goldfronted or green chloropsis** A resident; bulbul(+-) this bird stands at 19 cm. A blackish grey curved bill, with a purple and chin and throat. It is a grass green bird with a golden forehead. It affects the wooded areas and forests, through out the union. Its perfect plumage helps it to blend with the background.

So folks, this was the list of birds that we saw in and around Phansad and its surrounds 50 kms.

- SALEEL JOSHI.

## Winged Glory: The Common Butterflies of Phansad

The butterfly is one of the most beautiful of all insects. It is a winged insect belonging to the phylum **Arthropoda** and order **Lepidoptera** (which means 'scale wings') Butterflies live almost everywhere in the world but most are attracted to forests, fields and woodlands. The forest in Phansad is of moist deciduous type with a few evergreen patches. With a rich diverse forest as in Phansad, it easily attracts many species of butterflies, some of which have been listed below:

### Swallowtails.

This species has well developed and **tailed hind wings** hence the name 'Swallowtail'. This family is represented in Phansad by three species. Most Swallowtails are forest dwellers of which the **Common rose** and **Crimson rose** are considered to be poison-eaters as they feed on poisonous creepers due to which they are avoided by predators.

1] Common rose: (*Pachliopta aristolochiae*)

A common butterfly often seen flying around in open areas. This red bodied swallowtail gives out warnings to predators as being poisonous or 'distasteful'.

2] Crimson rose: (*Pachliopta hector*)

Also a very common butterfly. Bright crimson markings on hind wings as well as on the body to warn predators.

Both the Crimson and the Common Rose are mimicked by other butterflies for protection.

3] Common Blue Bottle: (*Graphium sarpedon*)

A handsome butterfly which flies swiftly flashing its blue-green colours. In Phansad it can be seen flying around damp patches along with other butterflies.

### Whites / Yellows - The Pierids :

A dominant group of butterflies in and around Phansad. As the name suggests, this group of butterflies consists of mainly **white, yellow and orange** butterflies with black markings. These butterflies may have helped in originating the word - '**butterfly**' due to the yellow colour. The whites and yellows are basically sun-worshippers and are attracted to flowers. 6 species belonging to this group is seen in Phansad.

1] Common Grass Yellow : (*Eurema hecabe*)

Very common throughout India. Seen commonly flying around grassy patches. It is bright yellow in colour, which makes it very easy to spot and identify.

2] Psyche : (*Leptosia nina*)

A weak flier. Not very conspicuous as it is seen flapping in the undergrowth and near the ground.

3] **Common Wanderer** : (Pareronia valeria)

Wanders in open forests as it flies from flower to flower showing the combination of black and white. Often seen basking in the sun. The female of this species mimics the Blue tiger with its pale blue and black markings, which makes it difficult to differentiate the two species.

4] **Great Orange Tip** : (Hebomoia glaucippe)

This large butterfly is a treat to watch. It is a powerful flier, which flashes its orange tips against the white. In Phansad it is seen in small openings in the forest area skipping from flower to flower and basking in the sun.

5] **Common Jezebel** : (Delias eucharis)

A very colourful butterfly which is also seen in the city. Common throughout India it is brightly coloured with its markings of yellow and orange which warns the predators to 'keep-off'. In Phansad it is commonly seen feeding on the Lantana flowers.

6] **Common Gull** : (Cepora nerissa)

Often seen on hot days flying near damp patches. The Common Gull is attracted to flowers and like most of the other whites and yellows it is a common sight.

**Milkweed Butterflies :**

These butterflies feed on poisonous plants such as milkweeds and figs, which make them 'distasteful' to predators. The striking colour patterns seen in these butterflies warn its predators to stay away. Such a strategy of survival and the colours of these butterflies make them interesting to observe and study. Four species of milkweed butterflies have been recorded to be common in the Phansad sanctuary:

1] **Plain Tiger** : (Danaus chrysippus)

The most familiar butterfly. It is a hardy butterfly thriving in various habitats. Basically a butterfly of the open plains this milkweed 'warns' its predators with its orange and black markings. Many other butterflies mimic it.

2] **Glassy Tiger** : (Parantica aglea)

The Glassy Tiger is found in the forests as well as in the openings. It is a small milkweed butterfly with black and transparent white coloration thus giving it a glassy appearance. The Glassy tiger and the Blue tiger are similar. Close observation can help in differentiating the two.

3] **Blue Tiger** : (Tirumala limniace)

Frequently seen in the gardens this milkweed butterfly is seen both in and out of the forest. It is a migratory butterfly. Often seen in great numbers in Phansad along with other milkweeds.

4] **Common Crow** : (Euploea core)

The most abundant among the milkweeds. The Common Crow has a wide range of food plants and is also not very specific with its habitat. These milkweeds are seen sailing about in large numbers before migration.

## Brush-footed Butterflies - The Nymphalids

The first pair of legs in these butterflies has brush like outgrowths hence the name –Brush-footed butterflies. These strikingly coloured butterflies are strong fliers and love to bask in the sun. The Brush-footed butterflies are not always attracted to flowers but also prefer ripe fruits and damp spots. The Pansies are a part of this group which show the 'eyespot' on their wings to confuse its predators.

1] Blue Pansy :(Junonia orithya)

One of the prettiest butterflies seen in Phansad. It flashes around its amazing blue colour as it swiftly flies in the open plains. It prefers dry patches and is usually seen during the warmer part of the day.

2] Common Leopard :(Phalanta phalanta)

The Common Leopard shows-off its combination of black and orange-yellow as it basks in the sun. An active butterfly usually seen skipping from flower to flower with other sun-loving butterflies.

3] Lemon Pansy :(Junonia lemonias)

Commonest among the Pansies. This butterfly is often seen basking near or on the ground. It is fond of flowers and can be identified by its lemony-yellow colour surrounding its eyespots.

4] Chocolate Pansy :(Precis iphita)

This chocolate-brown coloured pansy camouflages itself amongst the undergrowth. Common throughout India this dark butterfly is usually seen in the shade and near damp patches.

5] Peacock Pansy :(Junonia almana)

Another beautiful pansy found in the Phansad sanctuary. Presence of 4 eyespots out of which 2 are large. The striking eyespots stand out against the yellow colour of the wings.

6] Commander :(Moduza procris)

The Commander can be spotted easily as it sails gracefully with its wings held horizontally. It also spreads its wings in a horizontal manner while basking in the sun.

-Sameer Punde

## SPIDERS AND ANTS AT PHANSAD

Spiders and ants can be interesting. If you told me this before the trip to the Phansad wildlife sanctuary, I'd probably laugh. Till then the only web I'd take seriously was the World Wide Web and ants were only an irritant during picnics. But during the nature trail through the sanctuary I was made aware of the ingenuity and subtlety of their designs.

The first such revelation was the **Funnel Web spider**, which as its name suggests made webs that like a funnel narrowed towards the end where the spider waited stealthily. As soon as lunch appeared in the shape of a tasty fly stuck on its web, the spider emerged for the morsel. A little ahead were bushes that seemed completely enveloped in cobwebs - the handiwork, it seemed of a creature called the **Colonial spider**. True to its name, the spider with the zeal of a coloniser invades the territory and marks it with its web. Even the bathroom had a clutch of long-legged beauties, the **Daddy Long legs**, spiders that seemed to walk as if on stilts.

Ants are familiar creatures and you'd think if you know one ant, you know them all. But at the sanctuary I was amazed to see the abode of the **Fort ant**, a veritable fortified structure in concentric circles, constructed on a sloping ground and designed thus to keep the water out.

That ants can be magnanimous too became evident as our resource person, Rahul told us of the strange association of the **Cocktail ants** that allow a Rufus Woodpecker to build a nest in their abode and allow the woodpecker's fledgling to feed on them.

One thing is for sure, the next time I think of wildlife I know it won't mean just the great outdoors. After all spiders and ants lead lives that are just as interesting as mammals that live in the jungle.

- Aishwarya Mavinkurve



The home of Fort ants

## Footprints on the sand: The seashore life of Murud beach

During this camp we got a chance to visit Murud beach along with the resource persons and could uncover some of the glimpses of the coastal ecosystem. The Murud beach can be grouped as the combination of **rocky** and **sandy** shore types of seashore.

Indeed, our Mother Earth is full of spectacular creatures and some of the most beautiful and wonderful of these occur in the sea. The seashore or the **inter-tidal zone** is the most popular of all the regions of the sea. This is because of its easy accessibility and its diversity in the habitat. During our visit to the Murud beach, we all could see and study numerous animals and **Phytoplanktons** (small plants found in the sea, where sunlight can penetrate upto) within a short span of hardly one and half-hours. But this is only an account of some of the common representative animals.

Unlike the tideless seas like the Mediterranean, the seas that lap Indian shores have tides. High and low tides occur roughly **every six hours**.

As it has been already mentioned Murud beach is a **mixed shore**. The rocky part of the shore houses animals and plants, which can cling to the rock surface. Typical rock dwellers are the **Acorn Barnacle (Balanus), Periwinkle, Oyster, Mussel, Hydroids, Rock Sea Anemones and Sea weeds such as Ulva, Padina, etc.** We studied many **Gastropod snails**. Fishes (small), sea slugs and even snails are found in rock pools, which retain some water. Being the mixed shore, the Murud beach is really the perfect place or site to study coastal ecosystem to a great extent. The sandy parts of the beach are exposed to surf or waves. A sandy beach looks apparently barren until one starts digging. After digging one can find sand-dwelling animals like the **Ghost crab (Ocypode), Mole crab (Eerita), and Wedge clam (Donax), etc.**

In rock pools on sandy beaches and mud flats, what is visible at first glance is but a small fraction of the total population, as much of it lives under stones, or burrows into the sandy ground.

We saw many animals and fishes from rock pools by turning over stones. While doing so one must also take care to see the active fishes and prawns swimming away to hide in cracks and contracting sea anemones. We also turned the stone back to its original position, so that the sessile (immobile) animals such as **Sponges, Sea anemones, Tube dwelling worms, Hydroids and Bryozoa** are not exposed to sun's heat or to their enemies.

The list of animals that we saw and studied are many but mention may be made of the following:

- 1) **Sponges** - These animals look like plants. They can live singly or in colonies. They form flat **encrustations** on stones.
- 2) **Coelenterata** - Among the coelenteratis we observed **Pennaria**.
- 3) **Bryozoa** - Among the polyzoa, we observed **Barentsia** and **Pedicallina**.

4) **Arthropoda** - We observed the **Brine Shrimp** (*Artemia salina*), **Acor barnacles** (*Balanus*). When exposed at low tide *Balanus* look like white tents or miniature volcanoes. The barnacle has been jocularly compared to a boy standing on his head inside a limestone house and kicking his food into his mouth with his feet. Among Decapods (having ten walking legs) we observed the **Prawn, Pistol shrimp, Cleaner shrimp, Crayfish and Lobsters** can also be seen. Among crabs we could observe **Ghost crab**.

5) **Mollusca** - We observed **Cowrie**. Among the bivalves we saw **Windowpane oyster** (have flat circular shells and are found living in mud, shell has the appearance of mica) and **Scallop (PECTEN)**.

### Some birds which were seen by us.

We saw the beautiful display of flocks of **brown headed gull** on the shore and large flocks floating effortlessly on the sea. Here in this beach we saw many birds feeding on the sea shore as for example little **ringed plover, gull-billed tern, and oyster catcher**. Moreover some of our campers could also see **spotted sandpiper, little cormorant and white-bellied sea eagle**. *Guano* (birds droppings) are excellent source of nitrogen and phosphorus and can be used as manure.

The camp at Phasad Wildlife Sanctuary was really an eye opener for almost all of us in many and varied aspects.

Conservation of wildlife in the sea is as important and has same weightage as on land. We were taught to be content to watch the sea shore life. If one must collect the sea shore flora and fauna, **please do not overdo it**. It is only an inconsiderate group of people who collect huge numbers of life forms from the seashores only to keep them in the dustbin later on. Let us not be one of them.

So, if one goes to Phasad wildlife sanctuary please don't forego the idea and plan of visiting Murud beach - a real place to study seashore fauna and flora. It is only, at the most, 20 minutes drive from the sanctuary. Lastly, I hope and pray that you all have a nice journey.

-Mayanglambam.OJIT.K.S.

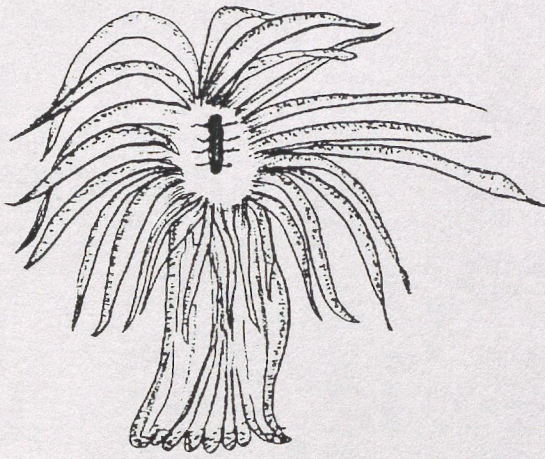


Fig: sea Anemone

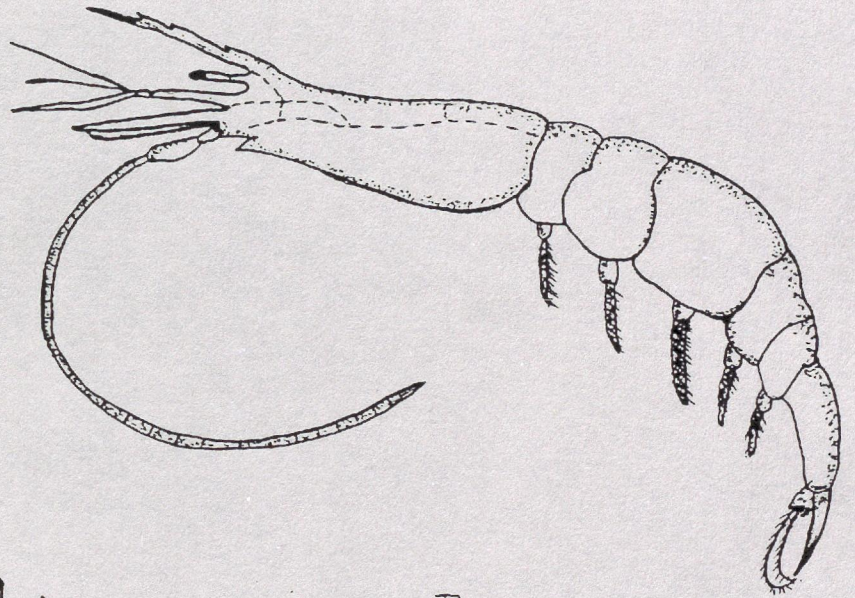


Fig: Prawn

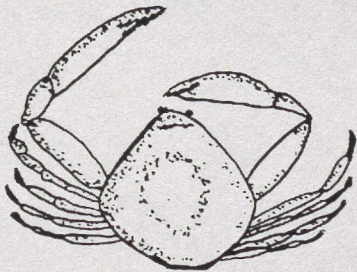


Fig: Porcelain crab

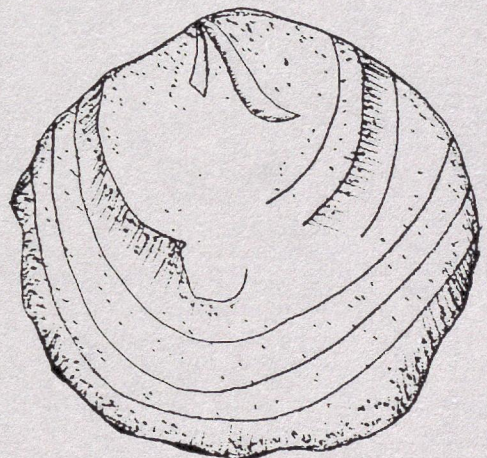
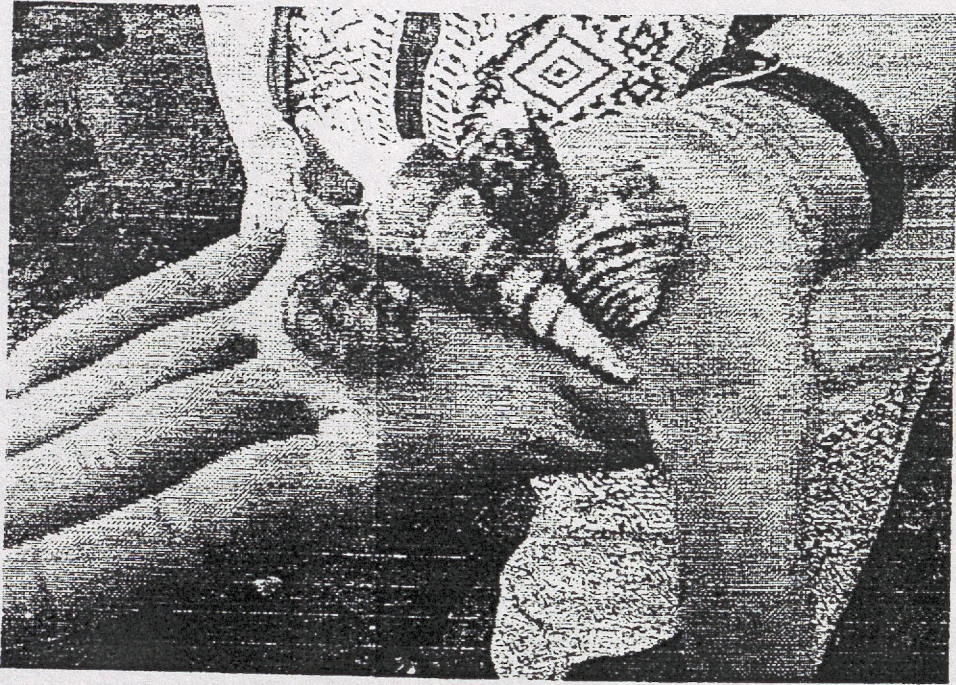
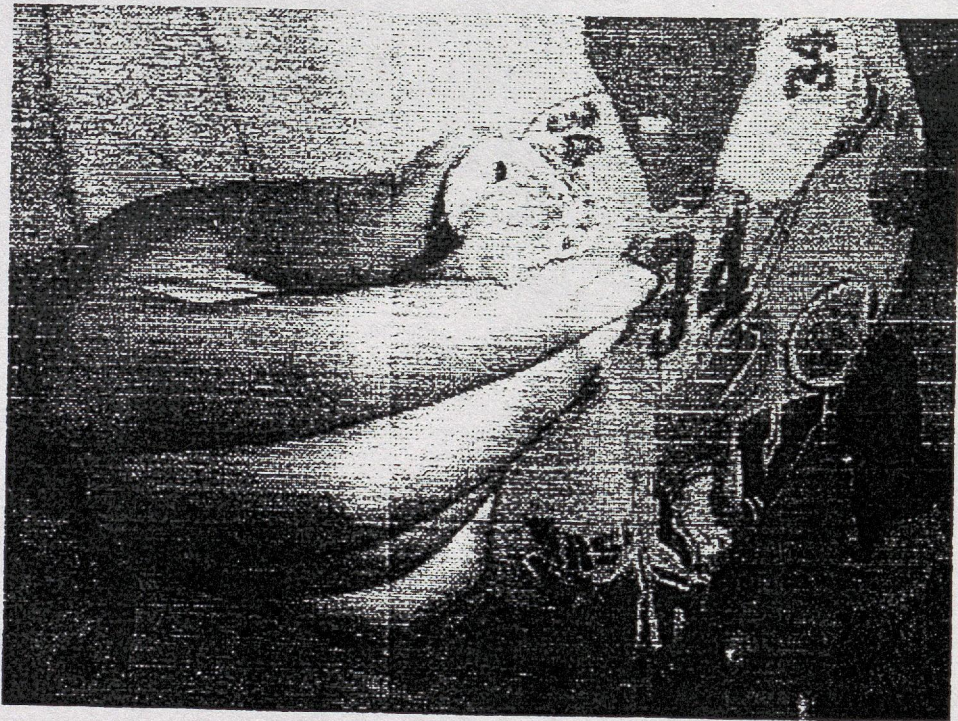


Fig: windowpane oyster

ORGANISMS  
COMMONLY FOUND IN  
SEASHORE.



Shells at Rajpuri beach



An inquisitive Mollusc at Rajpuri beach

## The history of the fort of Murud- Janjira.

In the early sixteenth century, the *Kolis* were well to do fishermen who lived along the Rajpuri coast near present day Murud district. Their village was constantly being looted by dacoits, who came in from the sea. So they built a wooden watchtower. This tower was strategically placed and caught the eye of the *Nizam Shah of Ahmednagar*, who wanted control over it. So he sent his *Sardar Piram Khan* to conquer it. He got the *Kolis* drunk and took over their tower. Later between 1567 - 1571 this tower was re-built using stone.

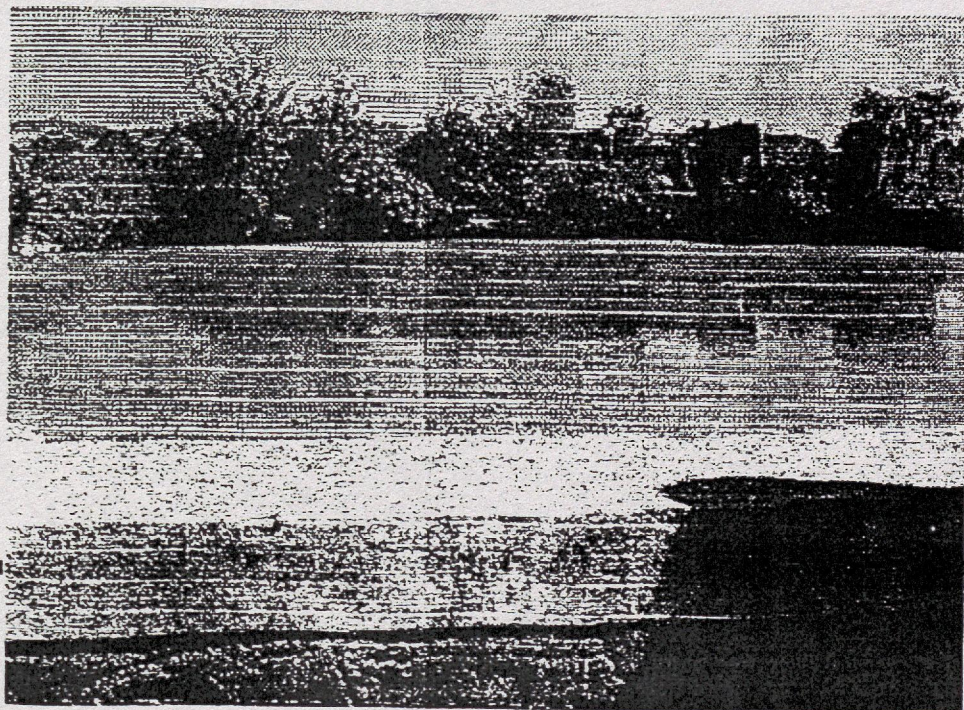
It was known *Killa Meherub* or *Janjira* after a huge well was found on it's premises.

The *Siddhis* were originally from *Abyssinia*, in Africa but came to Murud as traders of food and textiles. They found favour with the Nizam as they were hard workers and also from the same religious denomination as the Nizam. Later on the *Siddhis* settled in Murud. In the late 1500s, a descendent of the *Siddhis* called *Malick Amber* became a *vazir* in the court of *Murthaza Nizam Shah*. *Malick Ambar* was in charge of collecting taxes and measuring land. He looked after the fort in the name of the Nizam. However over time the title and the fort was inherited. From 1781 to 1947 the fort was ruled by the *Siddhi* family.

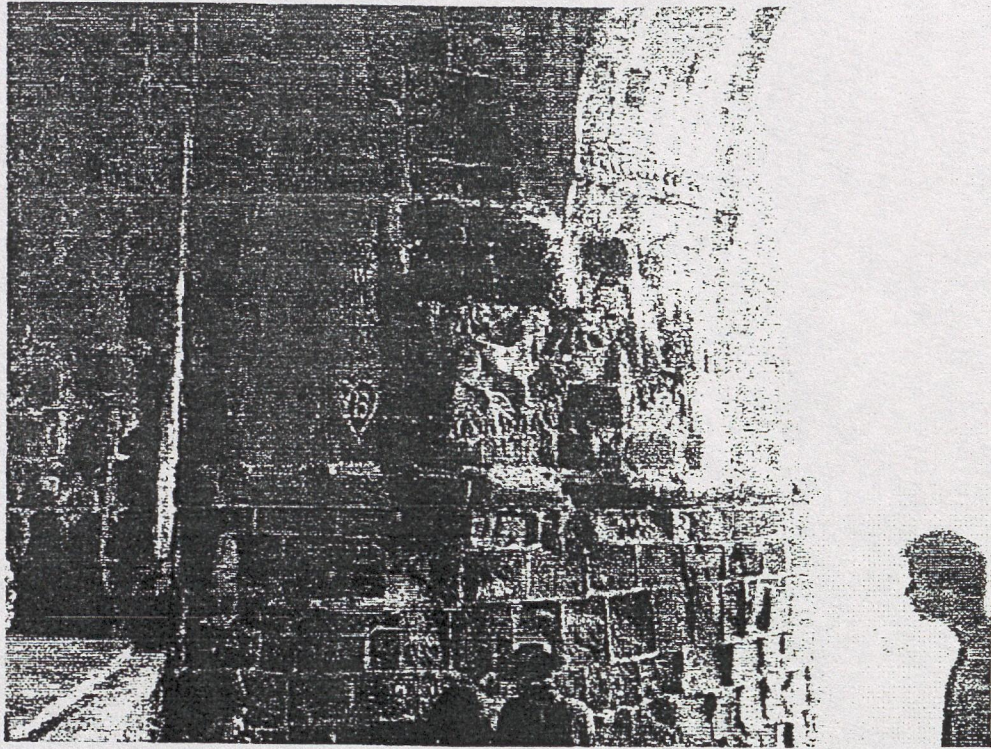
The *Janjira* fort was a constant challenge to the Maratha power. Time and again *Shivaji*, *Sambhaji*, the *Peshwas* and other Maratha leaders tried to capture it. But the fort remained unconquered for three hundred and thirty years. Thus it was named '*ajinkya durg*' which when translated means the 'unconquerable fort'.

In 1947 when we gained independence all titles were abolished and under the leadership of *Sardar Vallabhai Patel*, the fort and adjoining land was taken over by the Government of India. Till about twenty five years ago people inhabited the fort of *Janjira*. Later however they were told to leave and when they left they took the doors, windows and artillery with them leaving it in the dilapidated state it is today. Despite this state of the fort, this structure outshines most of the forts in India. A visit there is a must – if one goes to *Alibag* or *Phansad*.

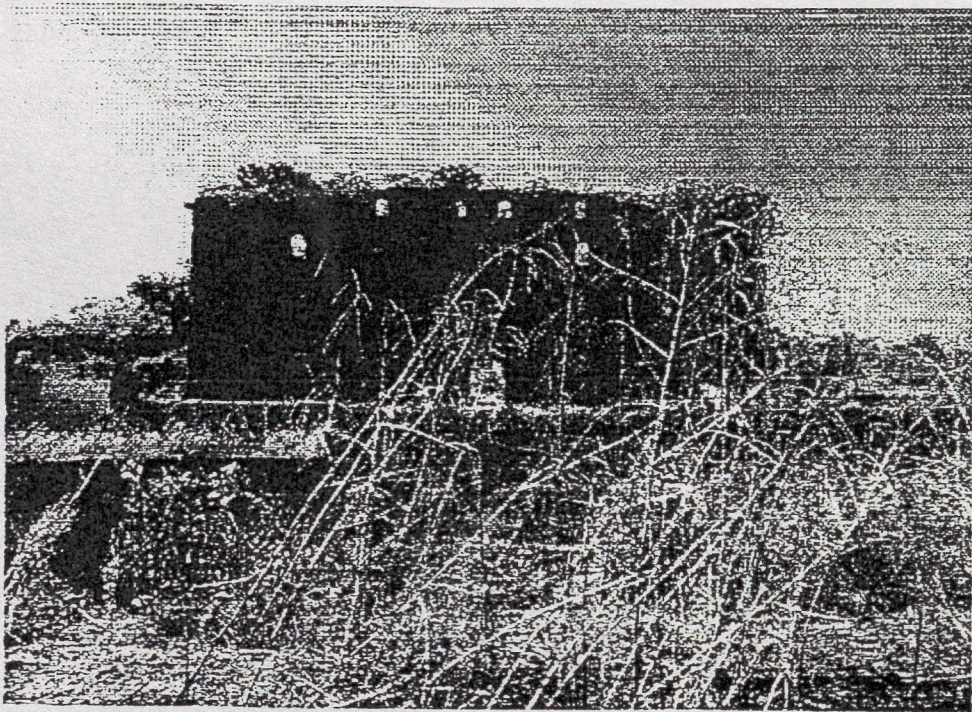
- *Persis Taraporevala.*



The well after which the fort was named



Entrance of Janjira



Ruins of Janjira

## What they won't tell you about Phansad wildlife sanctuary...

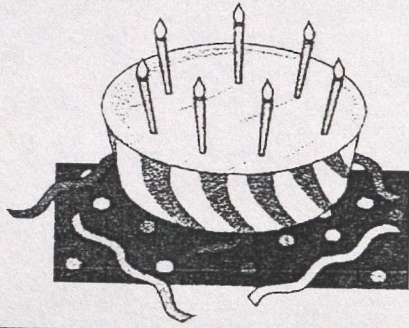
As a child I had once read about the adventures of a little boy called Jo who escaped from home to live in the woods. He lived in a tent, ate berries and roots and made friends with wild animals. At that impressionable age, when school and homework were high on the list of priorities, Jo became my hero. While I did once try to tie all my worldly belongings (my favourite doll, four stamps and a bangle) into a bundle on a stick and make good my escape, my brother squealed on me and I was grounded. So I gave up the whole scheme as a dream that only happened in story books and forgot all about it. Until several years later the Phansad trip happened. As part of the WWF's Volunteer Training Programme we were to go to visit a wildlife sanctuary over three days, live in a tent, roam the forest.. hmmm.. this sounded familiar. Yes, the essentials I carried with me this time were a little more sophisticated, and the little bundle was actually a duffel bag but that didn't change the fundamental principle - that of a journey to the wild, of discovery. Early on the morning of December 3 when we set out for Phansad, it was with hope in our hearts and adventure coursing through our veins. Getting there, we were told, would be a matter of five hours. Of course we had not accounted for some enthusiastic bird watching on the way which left the group richer in knowledge and late by a few hours.

The resthouse at the Phansad Wildlife sanctuary seemed cosy to begin with, but if you're on a camp, the tent is a lot cosier. The thickly wooded sanctuary held secrets of a whole new world that was slowly opening to me on nature trails; Spiders who resided in funnel-shaped webs as they sat waiting for dinner; the delicate patterns on the wing of a damsel fly; a small plant whose pulp acted as an antidote to scorpion bite; the strange association of the cocktail ants that allow a Rufous Woodpecker to build a nest in their abode and allow the woodpecker's fledgling to feed on them; the grace of a Racket Tailed Drongo in flight. How intricately was the web of life woven and with what care had nature dwelled on the details! One vivid memory of Phansad will remain the night trail through the jungle. Our torches were switched off and all we had to guide us was the shadowy form of the person ahead and reassuring footfalls. The jungle seemed to watch us go, silent except for the sound of the cricket and an occasional hoot of the owl. It was a uniquely humbling experience for suddenly, I felt like an intruder prying into the heart of the jungle.

The visits to the beaches of Rajpuri and Murud too were revealing (only in the ecological sense). My initial reaction was "What's the big deal about a stretch of sand - I mean everyone's been to beaches before." This time, I didn't just look, I observed - Barnacles clinging onto rock surfaces, shells that were more than bits of decoration, they contained living creatures, a Hermit crab. History came alive at the fort of Murud-Janjira, a fort bound by the sea and accessible by boat alone.

The principal aim behind the trip to Phansad sanctuary may have been to acquaint us with the biodiversity contained in our ecosystems. But for me the trip also held its underlying lessons: of becoming aware of that, which was around me all the time, of team spirit (specially when it came to birthdays and its bumps!) and how little it took to have good fun!

**-Aishwarya Mavinkurve.**



If you think I had all those candles for my 18<sup>th</sup> birthday. I'm sorry - you are mistaken. The reason being..... you should have guessed by now..... I was in Phansad on 4<sup>th</sup> Dec., 1999, and 4<sup>th</sup> Dec. happens to be my birthday -- My 18<sup>th</sup> Birthday. Sure enough, I missed the candles but I did something I never had done before, cut 2 Birthday cakes. My mother packed a cake for me, (I guess she felt sorry for not having me at home) and very surprisingly the group (the VTP group yaar!) had a cake for me which was a surprise. I still don't know how they got to know about it.

Before I left Pune, I was mentally prepared for 2 things - 1) an exciting birthday and 2) staying away from home and all my friends (the thought of even which depressed me). To tell you what, out of the two things only the first thing came true, the second not even being thought of (goes to show how good the place is).

The day started with a nature trail and it was on this trail that we saw most of the birds, butterflies, trees, etc., which the handbook provides. I managed to identify the call of the coppersmith (my first victory of the day). After the trail, which lasted for about 3 - 4 hours, I hit the bed in my tent and snored away to glory for 2.5 hours (trust me this is the first time I have slept on my birthday). I missed a session as a result, but I guess the sleep was worth it. My fellow campers didn't even bother to wake me up and I thank them for that.

After getting up and answering nature's call -- the Indian way, we had lunch and left for the most exciting part of the trip, i.e. the Beach. Here is where we saw a huge flock of black and brown headed seagulls and it was a real treat.

The surprising part about the whole day was that nobody gave me the impression it was my birthday, except for the previous night at 12.00 a.m. and the same night before sleeping. To tell you the truth, I personally forgot that it was my birthday and had to constantly keep reminding myself - "**Sandeep its your birthday. You've turned 18.**" In this way it was different, because back in the city one is constantly given undue importance, which gives him a high.

Anyway, on returning from the beach, we once again relaxed, had dinner and I cut the 2<sup>nd</sup> cake (the 1<sup>st</sup> being cut at 12.00 a.m. on 4<sup>th</sup> Dec., 1999) and went off to sleep. Sure enough, 24 hours passed away like 24 minutes.

P.S. The birthday bumps I got were of a different nature - they were with camping boots - Ouch!

-Sandeep Kirpalani.

Acknowledgements:

The Phansad Handbook and indeed, the trip to the wildlife sanctuary would not have been possible without the active help and guidance of the staff of the WWF-India, Pune division.

We wish to thank Danita Daniel, Director, Pune division, Jayshree Oberoi, education officer, Mrudul Patil, VTP co-ordinator and the resource people who made all this possible.

All the participants of the VTP course would like to thank the WWF -India, Pune division for designing such an innovative course. The course has helped the VTP members to gain an insight into nature conservation. We hope the WWF will conduct another such course to enlighten another such group.

