

## Missing HN

Balaram in his editorial<sup>1</sup>, has befittingly venerated and sketched the personality of H. Narasimhaiah (HN). Anyone who has had even a short acquaintance with HN will agree how meaningful and apt words like simplicity, humility and scientific temper are when attached to HN.

During my days at the National College, Bangalore, it was a usual sight for me to see HN mingling with young students of National School and College, with his extremely friendly and saintly demeanour. After passing out of National College, I would often see him at the Bangalore Science Forum. A couple of years ago I too noticed that his fading had begun to show up visibly, yet on more than one occasion I was overwhelmed to note that he was still formidable mentally, sharp with

his memory of names of his students and their successive generations, who were also students at the National College long after HN stopped meeting students in classrooms. On one such occasion at the Science Forum when a debate involved, among others, Science, Philosophy and Rationalism, I could see a fragile ascetic figure slumped in his chair with almost every part of his body resting limp, turn taut and true to his name roar like a lion, delivering crushing blows with his incisive logic and reason, a memory which I will cherish forever.

HN's passing away invited elaborate condolences from many politicians, who glorified his complete and meaningfully lived life, generously using words like progressive thinking, rationality and prac-

tising Gandhian, so on to qualify HN, but ironically the condolers also included many who promptly followed and owed allegiance to apparently high profile godmen and faith healers, known to profess magical cures and miracles with their sleight of hand, almost unaware of the ideals and tenets of the spirit of inquiry that HN championed all his life.

Truly we will forever miss HN for everything he was.

1. Balaram, P., *Curr. Sci.*, 2005, **88**, 329–330.

H. S. VINAY DEEPAK

Department of Physics,  
Indian Institute of Science,  
Bangalore 560 012, India  
e-mail: vinaydee@physics.iisc.ernet.in

## Schirmacher Oasis, East Antarctica, a lichenologically interesting region

The peculiar qualities of symbiotic association between an alga and fungus in the form of lichens, empower them to exploit a wide range of habitats. Lichens are remarkable in their ability to survive in a wide range of temperatures. They occur in the hottest deserts where temperature exceeds 55°C and are also found in Antarctica where temperature goes down to –50°C.

Lichens are the major floristic element in Antarctica along with bryophytes. Due to their high degree of adaptation to the harsh climatic condition they are the most interesting group of organisms, both for taxonomic and ecological studies. Antarctic lichens were being studied<sup>1</sup> since 1823. Among the 20,000 lichen species known from the world Antarctica has about 427 species, with around 40% being endemic to the continent<sup>2</sup>. The Antarctic Peninsula, Victoria Land and other localities in the western regions of Antarctica have been well explored lichenologically during the past hundred years and a good amount of information on the lichens of that area is available. However, only a few reports on lichens are available from the Queen Maud Land area in East Antarctica, where Indian Research Station 'Maitri' is situated in Schirmacher Oasis.

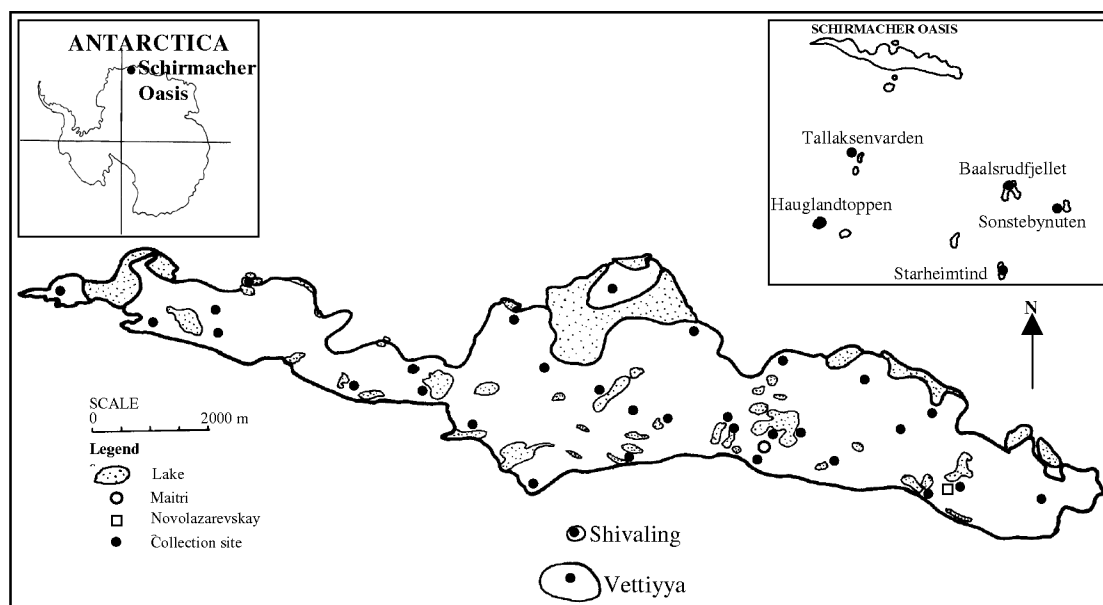
Schirmacher Oasis is a small ice-free land mass of 35 km<sup>2</sup> area, situated in

Queen Maud Land Area, East Antarctica, at the intersection of coordinates 70.8°S lat. and 11.8°E long. A total of ten nunataks are situated near the Schirmacher Oasis (Figure 1). Lichens from Schirmacher Oasis were first collected<sup>3</sup> by German wintering members in 1972. Ritcher<sup>4</sup> compiled the information described by German and Russian researchers and reported 26 species of lichens. Wafar and Untawale<sup>5</sup> were the first Indians who reported only a single lichen genus *Acarospora* from Schirmacher Oasis during the first Indian Antarctic Expedition (IAE).

The National Botanical Research Institute (NBRI), Lucknow has been identified by the Department of Ocean Development, New Delhi, as the centre for carrying out lichenological investigation in Schirmacher Oasis in the year 1991. The primary interest of NBRI is to understand the diversity of lichens in Schirmacher Oasis. NBRI first participated in the 11th IAE during the year 1991–92 and reported a total of 26 lichen species<sup>6–8</sup>, among which 12 were collected for the first time from Schirmacher Oasis. During the 17th IAE, a total of 19 lichen species were reported from the Schirmacher Oasis and neighbouring Vettiya nunatak, of which two were new records for the area<sup>9</sup>. Meanwhile, Gupta *et al.*<sup>10</sup> from the Botanical Survey of India, Kolkata casually

collected some lichen specimens from Schirmacher Oasis during the 18th IAE and reported five species, among which two were new reports. NBRI participated in the recently concluded 22nd IAE and identified a total of 35 lichen species from 31 sites in the whole stretch of Schirmacher Oasis and seven neighbouring nunataks. The known 35 lichen species belonged to 20 genera and 11 families and a total of 11 species, namely *Buellia illaetabilis* I.M. Lamb, *Carbonea assentiens* (Nyl.) Hertel, *Lecanora geophila* (Th. Fr.) Poelt, *L. orosthea* (Ach.) Ach., *Lecidella stigmathea* (Ach.) Hertel & Leuckert, *Leproloma cacuminum* (A. Massal.) J.R. Laundon, *Rhizocarpon nidificum* (Hue) Darb., *Rinodina endophragma* I.M. Lamb, *Sarcogyne privigna* (Ach.) A. Massal., *Umbilicaria africana* (Jatta) Krog & Swinscow and *Verrucaria holizoa* Leight., were reported for the first time from Schirmacher Oasis (Figure 2). So far, more than one thousand lichen samples have been collected from Schirmacher Oasis by NBRI team, who described a total of 41 species and many new taxa are yet to be described.

It is clear from the various lichenological explorations in Schirmacher Oasis that the region has a rich lichen flora. Every lot of carefully collected lichen samples yields either new species or new



**Figure 1.** Map of Schirmacher Oasis and neighbouring nunataks showing sites surveyed for lichen collection.



**Figure 2.** Some prominent macrolichens of Schirmacher Oasis, East Antarctica. **a**, *Umbilicaria aprina* Nyl; **b**, *U. africana* (Jatta) Krog & Swinscow; **c**, *Usnea antarctica* Du Rietz.

records for the region. However, identification of Antarctic lichens is a challenging task. Phenotypic variation due to the harsh climatic conditions is a common factor in Antarctic lichens and underestimation of this leads to incorrect identification. Blizzards, continuous light or darkness, low temperature and humidity are the major abiotic factors responsible for the phenotypic variation seen in Antarctic lichens. The freeze-thaw actions of the lichen thallus, slow growth, abnormal regeneration, animal feeding and fungal parasitism are other factors contributing significantly to the phenotypic variation. Out of 427 lichens that are known from the Antarctica, about 73% are microlichens (crustose-squamulose forms), which are the toughest groups to identify and require mostly detailed microscopic observation. These microlichens develop only a thin, primitively organized thallus, which is either completely affixed to the substratum over the whole lower surface or hidden in the uppermost layer of rock (endolithic). The microlichens are capable of colonizing in extreme habitats better than any other macroscopically visible plants. The lack of floras and monographs, unavailability of important type collections, lack of representative collections adequate to study the variability and distribution further complicate the taxonomy of Antarctic lichens<sup>11</sup>. The study of Antarctic lichens also demands prior working experience of a researcher with lichens of alpine, polar or cool temperate regions. The difficulties, excitement or inadequate knowledge in taxonomy of Antarctic lichens can be explained with the example of Dodge<sup>12</sup>, who reported a total of 429 lichens

from Antarctica, among which nearly half was described by Dodge alone or with collaborators, while the remaining half was by others lichenologists. The work of Dodge had been subjected to severe criticism and reexamination by several lichenologists. Castello and Nimis<sup>13</sup> re-examined and reduced the number of Antarctic endemics of Dodge from 152 to 31 valid taxa; the types of 94 species were proved to be synonymous to previously described species, while 27 were either poorly developed or non-lichenized parasitic fungi.

Realizing the need in taxonomy of Antarctic lichens, more reliable flora have been recently published by Øvstedal and Smith<sup>2</sup>. However, with the present rate of lichenological activities in the Antarctica by various countries, soon there will be bulk accumulation of new data and certainly the present flora becomes outdated. Lichenological research in a small area like Schirmacher Oasis is an example of continuous source of new data.

1. Torrey, J., *Am. J. Sci. Arts*, 1823, **6**, 104–106.
2. Øvstedal, D. O. and Smith, R. I. L., *Lichens of Antarctica and South Georgia: A Guide to Their Identification and Ecology*, Cambridge University Press, UK, 2001, p. 411.
3. Golubkova, N. S. and Simonov, I. M., *Trudy Sovet Skoy Antarkti Cheskoj Eksfeditzii Leningrad*, 1972, **60**, 317–327.
4. Richter, W., In *The Schirmacher Oasis, Queen Maud Land, East Antarctica and its Surroundings* (eds Bormann, P. and Fritzsche, D.), Jastus Perthes Verlag Gotha, Gotha, 1995, pp. 321–347.

5. Wafar, S. and Untawale, A. G., In *Scientific Report – First Indian Expedition to Antarctica*, DOD, New Delhi, 1983, pp. 182–185.
6. Upreti, D. K., *Willdenowia*, 1996, **25**, 681–686.
7. Upreti, D. K., *Feddes Repert.*, 1997, **108**, 281–286.
8. Upreti, D. K. and Pant, G., In *Scientific Report – Eleventh Indian Expedition to Antarctica*, DOD, New Delhi, 1995, pp. 229–241.
9. Pandey, V. and Upreti, D. K., In *Scientific Report – Seventeenth Indian Expedition to Antarctica*, DOD, New Delhi, 2000, pp. 185–201.
10. Gupta, R. K., Sinha, G. P. and Singh, D. K., *Indian J. For.*, 1999, **22**, 292–294.
11. Hertel, H., *Polarforschung*, 1988, **58**, 65–76.
12. Dodge, C. W., *Lichen Flora of the Antarctic Continent and Adjacent Islands*, Phoenix Publishing, New Hampshire, 1973, p. 399.
13. Castello, M. and Nimis, P. L., *Bibl. Lichenol.*, 1995, **57**, 71–92.

ACKNOWLEDGEMENTS. We thank Dr P. Pushpangadan, Director, NBRI for providing laboratory facilities, and National Centre for Antarctic and Ocean Research, Goa and Department of Ocean Development, New Delhi for their expedition-related assistance.

SANJEEVA NAYAKA  
D. K. UPRETI\*

*Lichenology Laboratory,  
National Botanical Research Institute,  
Rana Pratap Marg,  
Lucknow 226 001, India  
\*e-mail: upretidk@rediffmail.com*

## Changes in local intertidal seaweed habitats in the Andaman and Nicobar Islands after 26 December 2004 tsunami

The Andaman and Nicobar islands located in the subduction zone of the Burma Plate was the most affected region of India due to the recent tsunami on 26 December 2004. Here some interesting observations made by the author during 15–30 January 2005 as a part of spot surveys carried out at various coastal locations of the Andaman and Nicobar islands are reported.

Intertidal areas being more hospitable for seaweed growth<sup>1</sup>, the survey was conducted at intertidal locations of different islands of Andaman and Nicobar, viz. South Point Port Blair, South Andaman Island; Otragza, South Andaman Island; Mayabandar, Middle Andaman Island and Malakka, Car Nicobar Island. The intertidal areas at South Point Port Blair, Otragza, Mayabandar and Malakka either

showed destruction or edifice of seaweed habitats. The intertidal areas in the tropical region are dynamic and harbour a diverse range of seaweeds having a variety of life forms, which enable them to colonize faster compared to other higher organisms<sup>2</sup>. The inundation of seawater during high tide at South Point Port Blair, Otragza and Malakka allowed fugitive seaweed species like *Enteromorpha compressa*, *E.*