

3. Rao, P. S. N. and Umamaheshwar Rao, M., *Phykos*, 1999, **38**, 93–96.
4. Krishnamurthy, V. and Joshi, H. V., *A Checklist of Indian Marine Algae*, CSMCRI, Bhavnagar, 1970, p. 21.
5. Mairh, O. P., Zodape, S. T., Tewari, A. and Rajyaguru, M. R., *Indian J. Mar. Sci.*, 1995, **24**, 24–31.
6. Paula, E. J., Pereira, R. T. L. and Ohno, M., *J. Appl. Phycol.*, 1999, **11**, 111–121.
7. Anon, Report, Central Salt and Marine Chemicals Research Institute, Bhavnagar, 2003, p. 130.
8. *Times of India* (Ahmedabad edn.), 6 November 2005.
9. Eswaran, K. *et al.*, US Patent No. 6,893,479, May 2005.
10. Ghosh, P. K. *et al.*, US Patent Application No. 11/003,250, December 2004.
11. Seminar on 'Untapped potential of seaweed resources of Tamil Nadu and scope for gainful employment of self-help women groups of the coastal poor in seaweed farming', CMFRI, Mandapam, 21–23 February 2005.

12. National Academy of Agriculture, New Delhi, Policy Paper No. 22.

A. TEWARI
K. ESWARAN
P. V. SUBBA RAO
B. JHA*

*Marine Algae and Marine Environment
Discipline,
Central Salt and Marine Chemicals
Research Institute,
Bhavnagar 364 002, India
e-mail: bjha@csmcri.org

Response:

In our article, we had raised apprehensions about the possible spread of the algae *Kappaphycus alvarezii* in the waters of the Gulf of Mannar. In this connection it was suggested to introduce regular sur-

veillance mechanism in the Gulf waters to keep in check the rate of encroachment of *K. alvarezii* over other native flora, so as to avoid any threat of future bioinvasion by this algae.

Tewari *et al.* have clearly indicated that they are aware of the problem and necessary surveillance mechanisms are in use for monitoring the environmental impact of large-scale cultivation of *K. alvarezii*. It appears that the institutions involved in this programme are taking adequate measures for the safety of the biosphere reserve in the Gulf of Mannar region, which needs appreciation.

X. N. VERLECAR*
NEELAM PEREIRA

*National Institute of Oceanography,
Dona Paula,
Goa 403 004, India
e-mail: verlecar@nio.org

The 2005 eruption on Barren Island, Andaman Sea

The Barren volcano, the lone active volcano of the Indian subcontinent, has erupted time and again since the pre-historic period (Ravishankar *et al.*¹ and references therein). Yet the eruption is poorly documented in scientific literature. The Indian Coast Guard, Port Blair reported emission of smoke from the volcano on 28 May 2005. On 13 June, a team of geologists from the Geological Survey of India studied the nature and style of eruption and sampled the lava fragments. The activity was a continuous ejection of huge volume of juvenile gas, ash and discrete instantaneous outburst of incandescent coarser fragments of basaltic composition from a subaerial open vent. The explosion has been interpreted as mild Strombolian eruption inferred to have been triggered by the fragmentation of moderately fluid, volatile-rich, frothy magma in the upper part of the conduit but below the surface.

Barren and Narcondum on the west Andaman Sea are two volcanic islands that fall within a chain of active and quaternary volcanoes extending from Myanmar to Sumatra (Figure 1). The Barren is active while Narcondum is possibly dormant. The Barren Island exposes interstratified pre-historic lava and fragmental pyroclastics and an active volcano (Fig-

ure 2a). Hobday and Mallet², who first prepared the topographical cum geological map of Barren Island, described 'a symmetrical central volcanic cone in the midst of an amphitheater, a summit with

a height of ca. 1000 ft above msl, truncated summit marks the presence of a crater, emission of a thin column of smoke rises into the air and basaltic lavas flowing into the sea through breach on the west-

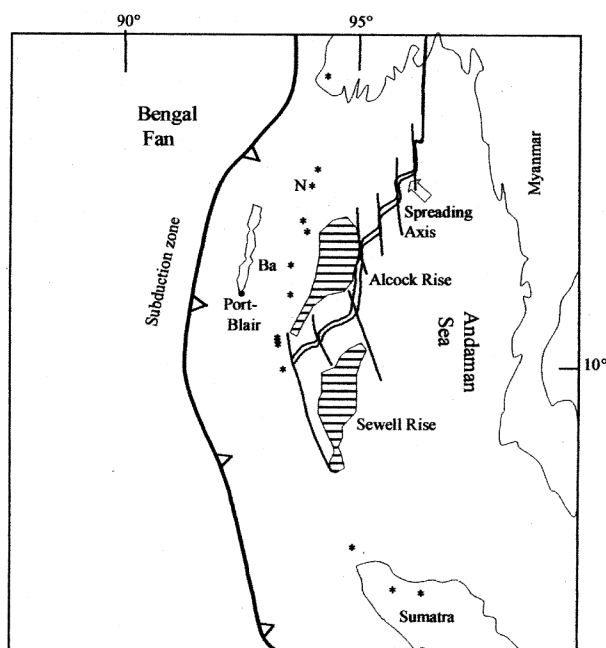


Figure 1. Location of Barren (Ba) and Narcondum (N) Islands, seamounts, spreading axis, Andaman Islands and volcanoes (asterisk)¹¹.