once every month for six consecutive months. Such an exercise is guaranteed to yield favourable results for Ph D students for the rest of their lives.

The next point to consider is the art of successful writing seeking grants, which is the ultimate measure of independence whereby the students could become their own teachers in learning the art of writing a successful grant proposals. I suggest that the students read the full paper except the result section and then make a tentative list of results to prove the given hypothesis (the so-called proof-of-principal). Students should also make a habit of visiting the NIH web page, http://crisp/cit/nih/gov, in order to get a sense of the flavour of the state-of-the-art grants.

Finally, various national conferences should include in their programmes, events like a 2-day workshop on paper and grant writing (four lectures of 1 h each would suffice) for the students. Spreading the awareness on the need of effective scientific communication among budding scientists, i.e. the Ph D students, is something, which will go a long way in ensuring excellence in the exercise of communication among the Ph D students. Scientific independence critically requires this attribute.

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Identification of gap areas for biological exploration

The three physical resources of the planet earth that include land, water and biological diversity are neglected, overlooked and taken for granted by humans. There is a need to study and document the immense biological wealth, before it is destroyed. India was botanically one of the best known tropical countries by late 19th century, by which time the country had one of the best national flora in the world[1]. The funding for biodiversity inventory research is meagre in contrast to that provided for biotechnology and other applied sciences. We have not yet completed the basic survey of our biota. And are yet to have an updated and modern *Flora of India*. We need extensive infrastructure and talented taxonomic personnel in abundance.

Studies carried out in India so far have resulted in the identification of about 47,000 species of plants and 81,000 species of animals. More than 15 lakh plant specimens housed in the herbaria of BSI are from 1800 onwards. Dense forest with impenetrable ground cover, inhospitable conditions and danger of wildlife prevents remote-area inventorization and restricts researchers to do inventorization only along the accessible areas/routes. Most of the systematic studies carried out in India are partially systematic. In several districts of Andhra Pradesh, the number of flowering plant taxa reported was in the range 700–800, which provides evidence for under exploration[2]. Many islands of the Andaman & Nicobar are under the category of unexplored or under explored[3]. This points out the status of botanical exploration of our country.

It is imperative for the country to have information on bioresources in as much detail as possible; however, the conventional method of inventorization would not optimize this effort. Therefore, there is a need to prioritize areas for inventorization. In order to achieve success, we have to find out the 'gaps' in the approach of inventorization and biodiversity assessment.

There is a need to digitize the location/area/surroundings of herbarium accessions in GIS domain. These can be then overlaid on satellite data-driven maps like vegetation type, fragmentation, disturbance regimes, biological richness and forest cover change. This would help in visualizing the 'gap' areas, and characterize areas into unexplored to well-explored zones and also provide inputs for further inventorization. Incorporation of geo-referenced herbarium data will allow assessing the habitat loss and change in landscape in conjunction with temporal satellite data. It will also help in understanding the past and present distribution ranges of species.

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